SAFETY AND SOUNDNESS ISSUES RELATED TO BANK DERIVATIVES ACTIVITIES—PART 3

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Safety and Soundness Issues Related...

HEARING

BEFORE THE

COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS
HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRD CONGRESS

FIRST SESSION

OCTOBER 28, 1993

(PART 3—Minority Report)

Printed for the use of the Committee on Banking, Finance and Urban Affairs

Serial No. 103-88

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PART 3 (Minority Report)

HENRY B. GONZALEZ, TEXAS, CHAIRMAN
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ONE HUNDRED THIRD CONGRESS
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November 22, 1993

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Banking, Finance & Urban Affairs Committee

Honorable Henry B. Gonzalez
Chairman
Committee on Banking, Finance
and Urban Affairs
2413 Rayburn House Office Building
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Attached please find the Minority Staff Report on Financial Derivatives. I appreciate the cooperation of your staff, and hope that this document will add some impetus to executive branch, as well as legislative branch consideration of the scope of this issue.

Sincerely,

James A. Leach
Ranking Member

JAL:LdP

JIM LEACH
IOWA'S CONGRESSMAN
FOR THE FIRST DISTRICT

LEACH CALLS FOR STRENGTHENED REGULATION OF FINANCIAL DERIVATIVES INDUSTRY

FOR IMMEDIATE RELEASE
CONTACT: Joe Pinder 202/225-6576

WASHINGTON, D.C. (Nov. 22, 1993) -- Based on a six-month study of the financial derivatives marketplace, Congressman James A. Leach (R-IA) today released a series of 30 recommendations for regulatory and legislative guidance to constrain systemic risk in a market he described as "the new wild card in international finance."

"Derivatives pose an interesting conundrum in that the problems they present may be too sophisticated for a Congress of generalists to deal with legislatively," Leach said. "However, this does not mean that legislators do not have the responsibility to set forth a general framework of concerns with the understanding that the executive branch must be held accountable for responsible oversight of the financial markets. It also does not mean that comprehensive legislation isn't in order if regulators fail to act," he warned.

Among the recommendations Leach called for are the establishment of an inter-agency commission to establish rules related to capital, accounting, disclosure and suitability for dealers and end users of over-the-counter derivatives products; recommendations for harmonized cross-industry and cross-border standards governing the sale of derivatives products; and the admonition that banking regulators should discourage financial institutions from active trading in the derivatives market unless they can demonstrate both adequate capitalization and the sophisticated technical capacity to be involved in such trading.

Leach, the senior Republican on the House Committee on Banking, Finance and Urban Affairs, made the recommendations as he released a 900-page report containing comments from the Federal Reserve Board, the Comptroller of the Currency, the Federal Deposit Insurance Corporation, the Office of Thrift Supervision, the Securities and Exchange Commission and the Commodity Futures Trading Commission.

Derivatives are financial products whose value is linked to, or "derived" from, another asset. Generally they are used to manage market risk -- for example, to insulate a party against interest rate swings or currency exchange shifts -- in a manner somewhat similar to commodity futures hedging. Although relatively unknown even to sophisticated individual investors, the derivatives market has grown so rapidly that it now has reached multi-trillion-dollar dimensions, with the line, according to Leach, "between hedging and speculating becoming increasingly difficult to sort out."

"Everett Dirksen once commented that a billion here and there pretty soon added up to real money. With regard to derivatives, it would appear that a trillion here and there may add up to a real problem," Leach said.

"Derivatives instruments are designed to help financial managers diminish risk, but, ironically, if tremors emerge in the international financial community, a product designed to modestly reduce risk for an individual company or institution may quantumly increase risk for the system as a whole," Leach said.

Given the circumstance that commercial banks have earned approximately $36 billion from trading revenues over the past decade, Leach suggested that "the challenge is for

government and industry to work together to ensure that a profitable past does not prove prologue for a profligate future."

"Historical experience is not always a guide to the future, especially when a relatively new market explodes in size," Leach noted. Hence, he suggested regulators have an obligation to stay on guard as the marketplace "expands in a time of unprecedented economic uncertainties."

"In the derivatives arena, there is a particular problem of new kids on the block," Leach noted. "Herds that feed on tall grass don't go unnoticed. If problems develop in the derivatives marketplace, it is a good bet that they will be less likely to stem from the major firms operating in the mainstream than from firms that are new entrants or operating at the fringes of the market.

"Potential problems, however, do not relate exclusively to new market participants," Leach said. "Both Salomon Brothers and the Bank of England have released studies this year that found risk management tools inadequate in many banks."

"Any regulation in the derivatives area must thus be premised on the assumption that all market participants are not equal in sophistication or integrity, and that distinctions must inevitably be made between prudential and less-prudential actors," Leach continued. "Just as well-run, well-capitalized financial institutions have a powerful case for considerable deregulation today, poorly run, poorly capitalized institutions demand significant, if not draconian, oversight."

"It may be true," Leach noted, "that a demand for strong capital reserves for derivatives trading amounts to government-imposed friction costs on financial institutions. Nevertheless, if market participants are not required to maintain strong capital positions and/or reserve against systemic risk, it will be non-participants -- community banks in the first instance through the deposit insurance safety net and the taxpayers in the event of a market debacle -- who will pick up the tab for the mistakes of a few.

"Care, therefore, must be taken to insure that we not have a least-common-denominator approach taken to regulation which might be adequate for one kind of institution in one time frame. Tomorrow's market circumstances and market participants may not be the same as today's."

In conclusion, Leach observed that the 900-page study, the product of extensive minority staff effort, was intended to focus legislative branch attention and force executive branch coordination in regulation of what he called "the most risk-oriented part of the international financial markets."

RECOMMENDATIONS FOR STRONGER REGULATORY STANDARDS

1.) Bank and thrift regulators should retain a strong leverage capital standard to generally guard against risks at insured financial institutions, including risks posed by derivative instruments. Regardless of the new risk based standards that take into account netting, market risk and interest rate risk, there is no substitute for a strong leverage capital requirement.

2.) Comparable rules concerning capital, accounting, disclosure and suitability should exist whether derivatives activities are conducted by a bank, broker-dealer, insurance company or other type of financial institution.

3.) Regulatory agencies, led by the FED and Treasury should pursue international discussions to achieve harmonization of international standards related to derivatives trading with the understanding that U.S. standards may, if appropriate, be more stringent.

4.) An interagency commission should be established by statute to consider comparable rules related to capital, accounting, disclosure and suitability for dealers and end-users of OTC derivative products. In addition, the commission should meet regularly to keep abreast of changes in the derivatives marketplace and consider other issues related to derivatives as appropriate. Members of the commission should include the federal banking commission agencies, SEC, CFTC and the Secretary of Treasury or a designee. Uniform commission rules for derivatives should be applied to all market participants. Currently unregulated market participants, such as insurance companies, should be supervised by either the SEC or the Secretary of Treasury.

5.) Banking regulatory agencies should discourage active trading in derivative markets by insured institutions, particularly smaller institutions, unless management can convincingly demonstrate both sufficient capitalization and sophisticated technical capabilities.

6.) The federal banking agencies should conduct joint regulatory examinations for major derivatives dealers including coordinated examination of banks and their affiliated holding companies.

7.) The federal banking agencies should establish coordinated training programs for examiners involved in monitoring derivatives activities at dealer banks and end-users.

8.) Regulators should require specific written policies approved by the board of directors to be in place for dealers and end-users of derivatives setting prudential standards for management of the risks involved in derivative activities and establishing a framework for internal controls.

9.) Regulations or guidelines implementing § 132 of FDICIA should outline proper internal controls for derivatives activities at insured institutions.

10.) The federal banking agencies should define the failure of institution-affiliated parties to have adequate technical expertise to be engaged in derivatives activities, commensurate for the level of activity, as an "unsafe or unsound" banking practice, subject to civil money penalties or a corrective cease and desist order. If an insured institution suffers or will probably suffer a financial loss or other damage involving the willful or continuing disregard of such an unsafe or unsound banking practice, then appropriate institution-affiliated parties should be removed by the regulator.

11.) The federal banking agencies should work to enhance the current risk-based capital standards to include off-balance sheet instruments and activities not currently covered. The federal banking agencies should evaluate the need to potentially increase capital requirements associated with the "future credit component" or "add-on" component of the current risk based capital standards. In addition, the federal banking regulators should not implement proposals related to bi-lateral netting if such proposals have the effect of reducing capital standards for derivative activities without a clearly commensurate decrease in credit and legal risk.

12.) Regulators should set guidelines for the use of collateral by counterparties to derivatives transactions. Some market participants have negotiated contracts that require the posting of collateral if certain "triggering events" occur. In some cases, the triggering event is based on the size of exposure using market values; in other cases it may be based on the creditworthiness of the counterparty. Excessive reliance on such collateral triggers, particularly those based on creditworthiness, may be imprudent. In particular, such collateral arrangements could place substantial liquidity pressures on a counterparty just when its creditworthiness is weakening and its access to liquidity is more limited.

13.) In evaluating a firm's models and simulations for purposes of evaluating credit and market risk, the regulators should adopt capital, accounting and disclosure standards based on a 99% confidence interval (3 standard deviations).

14.) Call reports should be expanded to include enhanced information to assess market risks, concentration of counterparty exposures and the risk reducing effects of legally enforceable netting contracts. In addition, incremental information that would differentiate derivatives used for hedging purposes from other derivatives and that would identify the related impact of each category on bank earnings and balance sheets as well as any deferred hedging losses or gains could also be useful. Call report changes should be made in a manner designed to minimize any additional regulatory burden placed on insured institutions.

15.) Enhanced uniform disclosure standards should be established by the regulators for derivatives activities. These enhanced disclosures should include:

a.) Greater disclosure of the extent of derivatives activities by an institution, both on- and off-balance sheet, as well as additional numerical data regarding the types and maturities of various derivative instruments. These disclosures would be beneficial to regulators and to the market.

b.) Disclosure to the regulators of individual revenue sources from derivatives activities.

c.) Disclosure of the level of speculative activity in derivatives conducted by dealers. While this form of disclosure may be difficult for some institutions under their current structure, it is currently available at certain dealers. There is no reason that trading activities cannot be broken down into component parts and that, for instance, customer trading services, institution hedging, and risk management activities cannot be segregated from speculative activities with these differentiations disclosed, at least to regulatory agencies.

16.) FASB and others responsible for setting accounting standards should, as a high priority, issue definitive guidance on reporting for financial instruments, including derivatives.

17.) Regulators and other standard-setting bodies need to provide clearer guidance on defining when risk management or hedge accounting is appropriate.

18.) Regulators should establish uniform guidelines as to an appropriate credit risk reserve that should be taken in conjunction with each transaction. While reserving for credit risk appears to be common among major derivatives dealers, it does not appear to be a uniform practice.

19.) Non-U.S. firms operating in this country should be subject to the same capital, accounting, disclosure and suitability requirements as U.S. firms.

20.) Regulators must adequately account for the legal risk related to non-U.S. counterparties. Regulators should ensure that institutions have adequate internal controls that take into account and set limits for legal risk. Higher capital requirements should be imposed in cases where the legal enforceability of agreements with counterparties is not certain.

21.) Regulators should work with industry groups to increase the standardization of documentation and the use of standard documents by all market participants. Increased standardization of documentation should decrease legal risk. In addition, as documentation becomes standardized, it will be easier for end-users to assess the risk/reward trade-offs of proposed derivative transactions.

22.) Regulators of financial firms marketing derivative products should insist upon high ethical standards in the sales practices of derivative units. The federal banking agencies should adopt uniform guidelines, similar to the OCC guidelines, requiring that a dealer bank should seek to understand the applicability of financial derivative instruments to the risks a bank-customer is attempting to manage. The bank dealer should be required to evaluate whether a particular transaction is appropriate for a particular customer. Proper due diligence in evaluating the appropriateness of a derivative product for a prospective customer is the best safe-guard for both the dealer and the end-user. The regulators should also consider whether industry-wide suitability rules should be enacted and cross-industry guidelines enacted.

23.) Regulators should examine the merits of whether dealer disclosures as part of individual counterparty agreements should be significantly expanded and improved, particularly with regard to the specific costs and risks of derivative instruments in varying interest rate or other market change scenarios. Such disclosures could be made mandatory when dealers enter into transactions with customers, particularly less sophisticated end-users such as many smaller banks, thrifts, businesses and retail customers.

24.) The federal banking agencies should jointly promote and participate in educational programs related to derivatives so that potential end-users, particularly smaller institutions, may be better informed as to the risks and benefits of derivatives activities.

25.) The appropriate regulators should establish minimum prudential practices for municipalities and pension funds that may use derivatives. Taxpayers and pension fund participants may unknowingly be at risk from inappropriate investments in derivatives. Anecdotal evidence indicates that the level of expertise with derivatives exhibited by municipalities and pension funds is widely varying.

26.) Regulators should examine the need for enhanced disclosures to customers of the risks that may be involved with derivative products, including embedded securities, for mutual funds that are end-users of derivatives.

27.) The regulatory agencies should provide to Congress recommendations to conform the netting provisions contained in the Bankruptcy Code, FIRREA and FDICIA to a single standard for purposes of greater efficiency. Pursuant to the recommendation of the FDIC, any prospective legislation should expand record keeping requirements for QFCs at undercapitalized institutions. In addition, pursuant to the recommendation of the FED, federal funds transactions and spot contracts should be covered under the statutory scheme.

28.) Regulators should examine the need for regulations to protect against systemic risk. While the OCC has expressed reservations about such need, the SEC would appear to have a persuasive case in suggesting that regulation may be the only means of ensuring that systemic risk is adequately addressed by participants. As the SEC points out, there is no agreement among dealers and end-users on how to manage systemic risk. Since currently dealers and end-users have a competitive bias against factoring systemic risk into their individual risk calculations, it would appear that regulation is the only responsible method of achieving such an objective.

29.) The U.S. Treasury should evaluate the benefits of utilizing derivative instruments for hedging purposes to improve the efficiency of government financial management practices. Sovereigns around the world use derivatives for financial risk management purposes.

30.) To the extent that the recommendations described above may not be implemented administratively, framework legislation outlining regulatory responsibilities without delineating specificity in standards setting may be necessary.

HENRY B. GONZALEZ, TEXAS, CHAIRMAN
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COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS
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2129 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-6050

November 22, 1993

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Dear Banking Committee Colleague:

Derivative instruments are becoming increasingly important tools in the modern financial world and raise important public policy implications. Particular questions arise as to whether these financial products may pose an extraordinary risk to the government's deposit insurance safety net. The impact on global markets of derivatives is considerable, and several studies are currently being prepared to examine issues surrounding these instruments. It may be anticipated that issues involving derivatives and their impact on the global financial system will come before the House Banking Committee in the not so distant future.

Accordingly, I have directed the Banking Committee's Minority Staff to prepare an informational report on financial derivatives for Members of the Banking Committee. In preparing this report, inquiries were sent to the Office of the Comptroller of the Currency, Federal Reserve Board, Federal Deposit Insurance Corporation, Office of Thrift Supervision, Securities and Exchange Commission and Commodity Futures Trading Commission requesting the answers to a series of questions concerning derivatives. The staff also conducted extensive research and met with a wide variety of market participants.

As a result of this research, please find attached the Minority Staff report, Financial Derivatives and 30 Recommendations for stronger regulatory standards concerning derivatives. The staff report is divided into two parts. Part One provides a general market overview and discusses the regulators' concerns related to derivatives. Part Two is designed to be a reference guide to derivatives and contains extensive background information on industry practices, risks and regulation. The 30 Recommendations for stronger regulatory standards are largely derived from the views of the regulators and suggest areas where the regulators may take action to implement prudential safeguards concerning derivative activities.

I hope that this staff report may be helpful to you as the Banking Committee begins to consider this complex and challenging issue.

Sincerely,

James A. Leach
Ranking Member

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23.) Regulators should examine the merits of whether dealer disclosures as part of individual counterparty agreements should be significantly expanded and

improved, particularly with regard to the specific costs and risks of derivative instruments in varying interest rate or other market change scenarios. Such disclosures could be made mandatory when dealers enter into transactions with customers, particularly less sophisticated end-users such as many smaller banks, thrifts, businesses and retail customers.

24.) The federal banking agencies should jointly promote and participate in educational programs related to derivatives so that potential end-users, particularly smaller institutions, may be better informed as to the risks and benefits of derivatives activities.

25.) The appropriate regulators should establish minimum prudential practices for municipalities and pension funds that may use derivatives. Taxpayers and pension fund participants may unknowingly be at risk from inappropriate investments in derivatives. Anecdotal evidence indicates that the level of expertise with derivatives exhibited by municipalities and pension funds is widely varying.

26.) Regulators should examine the need for enhanced disclosures to customers of the risks that may be involved with derivative products, including embedded securities, for mutual funds that are end-users of derivatives.

27.) The regulatory agencies should provide to Congress recommendations to conform the netting provisions contained in the Bankruptcy Code, FIRREA and FDICIA to a single standard for purposes of greater efficiency. Pursuant to the recommendation of the FDIC, any prospective legislation should expand record keeping requirements for QFCs at undercapitalized institutions. In addition, pursuant to the recommendation of the FED, federal funds transactions and spot contracts should be covered under the statutory scheme.

28.) Regulators should examine the need for regulations to protect against systemic risk. While the OCC has expressed reservations about such need, the SEC would appear to have a persuasive case in suggesting that regulation may be the only means of ensuring that systemic risk is adequately addressed by participants. As the SEC points out, there is no agreement among dealers and end-users on how to manage systemic risk. Since currently dealers and end-users have a competitive bias against factoring systemic risk into their individual risk calculations, it would appear that regulation is the only responsible method of achieving such an objective.

29.) The U.S. Treasury should evaluate the benefits of utilizing derivative instruments for hedging purposes to improve the efficiency of government financial management practices. Sovereigns around the world use derivatives for financial risk management purposes.

30.) To the extent that the recommendations described above may not be implemented administratively, framework legislation outlining regulatory responsibilities without delineating specificity in standards setting may be necessary.

Financial Derivatives

Part One

Market Overview and Supervisory Concerns

A Report Prepared By

House Banking Committee

Minority Staff

November 1993

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Under the Direction of:

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INTRODUCTION

Derivative instruments are becoming increasingly important tools in the modern financial world and raise important public policy implications. Questions arise as to whether these financial products may be too complex or entail too extraordinary risks for market participants, especially those backed by the government's deposit insurance safety net. The impact on global markets of derivatives is considerable, and several studies are currently being prepared to examine issues surrounding these instruments. It may be anticipated that issues involving derivatives and their impact on the global financial system will come before the House Banking Committee in the not so distant future.

As part of a program of periodic informational studies to explore various issues of importance to the Banking Committee and its Members, Congressman Leach directed the Banking Committee's Minority Staff to prepare an informational report on financial derivatives. Congressman Leach sent letters to the Comptroller of the Currency (OCC), Federal Reserve Board (FRB), Federal Deposit Insurance Corporation (FDIC), Office of Thrift Supervision (OTS), Securities and Exchange Commission (SEC) and Commodities Futures Trading Commission (CFTC) requesting the answers to a series of questions concerning derivatives.

In addition, the Minority staff met with representatives of the Federal National Mortgage Association, the Federal Housing Finance Board, Citicorp, the Securities Industry Association, the International Swaps and Derivatives Association, Morgan Stanley, Merrill Lynch, J.P. Morgan, Bankers Trust, Reuters, the OCC, the Group of 30, Ford Motor Credit, Banc One, the Office of New York State Banking Commissioner, the Conference of State Bank Supervisors, Chase Manhattan, Continental Bank, Standard & Poor's, Moody's and the Investment Company Institute to discuss derivatives activities.

The Minority Staff Report is divided into two parts.

PART ONE: Market Overview and Supervisory Concerns, focuses on the responses by the regulators to the questions submitted by Mr. Leach. Part One is divided into 4 sections.

Section I gives a relatively brief overview of the derivatives markets, outlines possible risks and describes current as well as proposed regulations. Each of the topics covered in this section is discussed extensively with much greater detail under a comparable format in Part Two of the Staff report.

Section II summarizes the highlights of the agency responses to Congressman Leach's questions.

Section III outlines the agency responses to Congressman Leach question by question, comparing and contrasting the views of the different regulatory agencies.

Section IV contains general conclusions and recommendations.

PART TWO: A Review of Industry Practices, Risks, and Regulation, is intended to be a general reference document for more detailed information on derivatives. Part Two provides background information on the derivatives markets and the current policy issues relating to derivatives. The information provided is based on the Minority staff's meetings with practitioners, the responses by the regulators to Congressman Leach's questions, and research sources referenced at the end of the section.

For further information concerning the Minority Staff Report on Financial Derivatives, please contact Joe Seidel, Terri Miller or Lammot DuPont at (202) 226-3241.

SECTION I

General Overview

PART ONE: MARKET OVERVIEW AND SUPERVISORY CONCERNS

SECTION I -- GENERAL OVERVIEW

This section gives a general overview of the derivatives marketplace and its regulation. **Part Two: A Review of Industry Practices, Risks, and Regulation**, of the Staff Report serves as a general reference on derivatives and contains an extensive discussion of each of Section I's subsections with far greater detail.

A. GENERAL INFORMATION ON THE FINANCIAL DERIVATIVE MARKETS

1. OVERVIEW

In general terms, a derivative instrument is a contract whose value depends on, or "derives" from, the value of an underlying asset, rate or index. Derivatives allow end-users, such as banks and corporations, to manage risks, enhance liquidity, save costs on debt issuance, and manage assets and liabilities in a more efficient and cost-effective manner. Derivative instruments are not traditional borrowing or investment vehicles; they can either be customized agreements between two counterparties (over-the-counter, or OTC derivatives), or standardized instruments traded on organized exchanges (exchange-traded derivatives).

In practice, OTC derivatives are not available to the general public, and are instead largely utilized by institutions. Individuals may purchase and sell exchange-traded derivatives, namely futures and options, including commodities. However, the exchange-traded markets are largely dominated by sophisticated and knowledgeable participants. Individuals may also be involved in derivatives through investment vehicles such as mutual funds which utilize derivatives or invest in securities with embedded derivative features. Derivative transactions <u>are not</u> a zero-sum game, i.e., <u>both</u> parties in a derivative agreement may benefit from the transaction. Speculation using derivatives does exist, but it appears that such activity represents a small portion of the overall activity. Instead, the vast majority of derivative transactions are customer-driven in that they are entered into by participants for risk-reduction purposes. This appears to be the primary function of derivative instruments.

The size of the derivative markets, or instruments contained therein, is often expressed in "notional[1]" terms, even though the notional amount is not owed, or even at risk. Notional amount is simply the base figure used to calculate payment streams.

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[1] The notional amount represents the principal balance underlying a derivative agreement. It is the amount upon which payments to counterparties are calculated, and functions as the fictitious principal generating the cash flows in a derivative agreement. The two parties to a derivative agreement trade the cash flow yield, not the notional amount. The notional amount is not at risk; typically, only 2-5% of the notional amount represents credit exposure.

As off-balance sheet items, derivatives may be used by institutions to increase their leverage.

2. THE FINANCIAL DERIVATIVE MARKETS

Derivative instruments are entered into throughout the world on one of two markets: **a.** Over-the-Counter (OTC) markets; and **b.** Exchange Markets. OTC derivatives fall outside of the jurisdiction of the Commodity Futures Trading Commission (CFTC) or have been exempted by the CFTC from its jurisdiction. Authoritative supervision over these derivative agreements is accounted for by regulatory constraints over the institutions which deal or use these instruments. In addition, any derivative considered a security would fall under the jurisdiction of the SEC. The exchange markets, where futures and options are traded, are regulated by the CFTC[2] and the SEC.

a. Over-the-Counter (OTC) Markets: OTC contracts are custom-tailored to a client's needs and often specify instruments and maturities that are not offered on any exchange. Parties negotiate all details of the transactions or agree to certain simplifying market conventions. Trading occurs without the interposition of the OTC market as a clearinghouse.[3] Customized contracts and lack of a clearinghouse mechanism inhibit liquidity in the OTC markets. There is no defined or physical market for OTC derivatives; rather, they are created, or designed by dealers to accommodate the specific needs of customers and clients. OTC derivatives are primarily designed to reconfigure, or hedge against, risks rather than to provide liquidity.

b. Exchange Markets: Exchange contracts are standardized as to maturity, size, and delivery terms. An important feature of trades in these markets is the interposition of the exchange as a clearinghouse to reduce the credit risk in each transaction. The virtues of "clearinghouse offset" include the ability of participants to close out a position simply by undertaking an opposite trade. Standardization and the clearinghouse feature limit transactions costs and fosters high degrees of liquidity. The primary economic function of exchange-traded derivatives appears to be the provision of liquidity.

3. DEFINITIONS AND PURPOSES OF DERIVATIVES

Financial derivatives are agreements which specify rights and obligations based on an underlying instrument, investment, currency, product, index, right or service. Derivatives are basically abstractions of certain features of stocks and bonds. They

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[2] The CFTC has jurisdiction over certain derivatives as they are considered financial commodities.

[3] A clearinghouse arrangement is a mechanism for calculation of mutual positions within a group of participants with a view to facilitating the settlement of their mutual obligations on a net basis.

allow end users, such as banks and corporations, to, among other things, manage interest rate risks, currency risks, liquidity, and geographic market considerations, both separately and independently. Derivatives also provide cost savings on debt issuance as well as more cost-effective asset and liability risk management. Banks record derivatives as "off-balance sheet" items. Dealers of derivatives, such as banks and securities firms, cater to the needs of end-users by making markets, and, in turn, earn fees as well as returns on their own positions.

There are two principal classifications of derivatives: forward-based/future-based derivatives; and option-based derivatives. A forward-based/future-based derivative is a contract which obligates each counterparty to enter into a specific transaction on a certain predetermined date. An option-based derivative gives the purchaser of the derivative a right, but not the obligation, to enter into a transaction on or before a predetermined date. Each of these can be further divided into four primary categories, each one representing a category of the instrument upon which derivatives are based: namely, Interest Rate, Currency, Commodity and Equity. Derivative instruments carry varying types and levels of risk.

Forward-based (OTC) derivatives include swaps and forwards. Future-based (exchange-traded) derivatives include all futures. Option-based derivatives (OTC & exchange-traded) include options based on each of the four principal classifications of derivatives noted above, and various other forms of options.

- **Swap:** A contract between two parties to exchange, or "swap" a stream of cash flows under an agreed upon set of terms. Example: In an interest rate swap, two counterparties exchange interest payment streams of differing character (fixed interest payments for floating interest payments) subject to predetermined rules.

- **Forward:** An agreement to purchase or sell a specific quantity of a commodity, government security, foreign currency, or other instrument at the spot (i.e., current) price, with delivery at a specified future date. Example: In a forward commodity contract, one party agrees to buy, and the other to sell, a certain amount of a commodity (e.g., pork bellies) at the spot price for delivery on a predetermined date.

- **Future:** A standardized agreement to purchase or sell a specific amount of a commodity or financial instrument at a particular price on a specified future date. Example: In a commodity future contract, one party agrees to buy, and the other to sell, a certain amount of a commodity (e.g., oil) at a predetermined price for delivery on a predetermined date.

- **Option:** A contract that grants the right, but not the obligation, to buy or sell a commodity or other financial instrument at a specified date in exchange for an agreed-upon sum (the premium). If the right is not exercised after a specified period, the option expires.

4. PARTICIPANTS IN THE FINANCIAL DERIVATIVE MARKETS

There are two broad categories of participants in the derivative markets. First, "dealers, or intermediaries" and second, "end-users." In principle, these two classes of participants are distinguishable by their motivations. In practice, some participants act in both capacities.

a. Dealers: Sometimes referred to as "intermediaries," dealers cater to the needs of end users by "making markets"[4] in derivative instruments. In doing so, they generate income from transactions fees, bid-offer spreads, and their own trading positions. Dealers primarily enter into derivative transactions to offset other "open" transactions, and in the process generate profits on the bid-offer spread. Dealers may also speculate by taking unmatched or unhedged positions.

Dealers include major U.S. money-center banks,[5] foreign banks, securities firms, insurance companies, and highly-rated corporations (primarily energy companies). Stringent credit, suitability and sophistication requirements limit the number of entities who act as dealers. Three investment banks and one foreign bank who act in a dealer capacity[6] conduct many of their dealing activities in wholly-owned but separately capitalized entities, called derivatives product companies (DPCs), which are triple AAA rated. The motivation for this is to meet demanding capital requirements for participation in the OTC derivative markets. Dealers will primarily "deal," or participate with counterparties who themselves meet rigorous credit standards.

b. End Users: End-users typically enter into derivatives transactions to, among other things, manage risk, reduce financing costs, manage assets and liabilities, and increase the yield of certain assets. A wide variety of business enterprises are end-users. They include, but are not limited to, banks, thrifts, government sponsored enterprises, sovereigns and related entities, corporations, insurance companies, farmers, municipalities, institutional investors, and speculators.

End-users consider derivatives as critical tools in managing their risk exposures. For example, the net worth of a bank is vulnerable to changes in interest rates because a bank's assets and liabilities have different maturities and repricing characteristics. Derivatives allow banks to manage changes in interest rates in a more efficient, and less costly way than by adjusting its traditional assets and liabilities. By using derivatives, end-users can disaggregate the risks that are often found in traditional instruments, and transfer such risks to parties who are better suited, or more willing to take on those risks. For example, many thrifts could potentially have

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[4] To make a market is to maintain firm bid and offer prices in a given security by standing ready to buy or sell round lots at publicly quoted prices.

[5] According to industry sources, ten U.S. banks currently deal in derivatives.

[6] Merrill Lynch, Salomon Brothers, Goldman Sachs, Banque Paribas.

benefitted from using derivatives during the interest rate spiral of the late 1970s/early 1980s. Corporations use derivatives primarily to reduce risks that are inherent in their businesses.

5. GROWTH IN THE FINANCIAL DERIVATIVE MARKETS

Growth in the financial derivative markets has been phenomenal since their use became widespread over roughly the last decade, and has largely been driven by growth in demand by end-users. Four principal forces have driven derivatives growth:

a. Forces Driving Derivatives Growth

(1) Shifts and Surges in Market Volatility: Volatility has been and continues to be an important factor in the growth of the financial derivative markets. Policy regimes and their impact e.g., Great Britain refusing to join the European Monetary System, and policies of devaluing currencies, are important to growth in the derivative markets.

(2) The Demand for Liquidity: The provision of liquidity by derivatives, a critical factor in any transaction, has been one of the greatest sources of growth for these instruments.

(3) The Demand for New Ways to Transfer Risks: Financial institutions have turned to derivatives to replace traditional hedging operations executed in the cash market, and nonfinancial corporations have turned to derivatives for general hedging and positioning purposes.

(4) The Global Diversification of Equity Portfolios: Moves by institutional investors and other large financial entities to diversify their equity portfolios has significantly contributed to the growth in the use of financial derivatives.

b. Growth by Type of Market

Growth by type of market comprises growth in exchange markets, and growth in OTC markets. Growth in the OTC markets exceeded and continues to outpace growth in exchange markets.

c. Growth by Type of Contract

Pursuant to growth in the use of derivatives, the markets for these instruments have also grown. Certain types of contracts have been stronger contributors to growth notably **(1) Interest Rate Contracts:** Most of the growth in financial derivatives has been in this area; **(2) Currency Contracts:** Next to interest rate contracts, currency

contracts contributed the most to the growth in derivatives; **(3) Equity Contracts:** Equity contracts are a small part of the whole derivatives market, but recent growth has been explosive -- they are likely to become a major part of the market in the near- to medium-term future.

d. Geographical Growth

The geographical growth of financial derivatives manifested itself primarily in the opening of new derivative exchanges and the widening share of nondollar currencies in OTC derivatives.

B. RISKS ARISING FROM AND RISK MANAGEMENT OF DERIVATIVE PRODUCT TRANSACTIONS

The risks arising from derivative transactions are numerous and particularly important considering the nature and magnitude of these transactions. In many ways, the risks associated with derivative instruments are the same types of risks banking institutions face daily in their lending, treasury and trading functions. According to the Office of the Comptroller of the Currency, "Financial derivative transactions currently represent a relatively small portion of the total credit, market, liquidity, and operational risk to which most banks are routinely exposed."[7] Derivatives repackage these risks in different combinations that, in comparison to traditional bank products, can be quite complex. As a result, derivatives require much stronger risk control and management systems. There are seven primary risks associated with derivative instruments. Systemic risk, although not considered as primary, is also an important risk consideration in the derivative markets.

1. COUNTERPARTY CREDIT RISK

Also known as credit risk, counterparty credit risk is the risk of loss in the event the counterparty to a transaction defaults, or otherwise fails to perform under the terms of the contract. Credit risk is greater in the trading of OTC derivative instruments than in the trading of exchange-traded instruments. The reason for this is that contracts in the OTC market may not be settled for long periods of time, usually are not collateralized, and are not subject to clearinghouse offset, which functions to eliminate credit risk. To compensate for this, rigorous credit standards are required to enter into OTC derivative agreements.

Current credit exposure from the default of a counterparty is measured as the positive replacement cost value of the derivative contract. When the replacement cost is negative, no loss is incurred if the counterparty defaults. Measuring current replacement cost and market value is approximated by "marking contracts to market,"[8] often on a daily basis. Replacement cost will always be only a small percentage of the notional principal amount of an OTC contract.[9] Estimating potential future credit exposure is a far more difficult task. Determination of potential exposure calls for an assessment of what the replacement cost of the derivative transaction could be in the future if the underlying variables that determine the value of the contract move adversely. Market participants use historical simulation studies, valuation models and other statistical techniques to assess potential exposure. Participants often assess "expected exposure" and "worst case exposure," to provide a cushion in the case of

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[7] "Risk Management of Financial Derivatives," Banking Circular (BC-277), Office of the Comptroller of the Currency. October 27, 1993.

[8] Adjusting the valuation of a security or portfolio to reflect current market values, as opposed to cost value.

[9] For example, the gross credit exposure due to derivatives activity at the 50 largest bank holding companies was 2.3% of the notional amount, and the net credit exposure was 1.46% of the notional amount.

misjudgment. Expected exposure is the credit risk that is "likely to materialize." Adequately managing credit exposure for the OTC and exchange markets requires several important elements such as:

- **Internal Controls:** Internal controls ensure that credit risk is assessed prior to entering into transactions with a given counterparty and that credit risk is monitored over the life of the transaction. The establishment of appropriate guidelines, policies and procedures to assess credit risk is critical. In addition, only people with significant expertise in the field of derivatives should be allowed to participate in these markets;

- **Documentation:** Proper documentation will help reduce and control credit exposure to counterparties. For example, the use of standardized Master Agreements (contract between counterparties) serves to reduce credit risks; and

- **Collateral:** Collateral arrangements, required for exchange-traded derivatives, and often used for OTC derivatives, are clearly important in the management of credit risk. These arrangements can be unilateral or bilateral, and are often negotiated to address the concerns of both parties.

2. MARKET RISK

The market risk of a derivative is the risk of a decline in the value of the contract arising from adverse movements in the price, index, or rate of the instrument underlying the contract. The market risk for derivatives, like that of any other financial instrument, by definition depends upon their price behavior when market conditions change. In order to explain this behavior, a dealer or end-user must identify the components of market risk and understand their interaction. One of the more severe problems in measuring market risk is the possibility of mispricing derivative products.

Risk managers within the derivatives industry have developed and continue to develop various ways to quantify market risk. Measuring market risk under all but the simplest method raises certain technical challenges. First, participants must establish a measure of risk that can be applied to a wide variety of derivatives. Second, participants must make assumptions about underlying volatility and correlations for both instruments and markets. Another challenge involves quantifying and preparing for the consequences of abnormal market conditions when the assumptions that are valid under normal markets no longer apply.

Several methods are used to measure and manage market risk. One method, the Value-at-Risk method assigns a single number, called the value-at-risk, to measure the amount a firm has at risk due to market fluctuations. Value-at-risk is the expected loss from an adverse market movement with a specified probability over a particular period of time. For example, a value-at-risk calculation using two standard deviations is designed to predict with 97.5% probability that any change in portfolio

value over one day resulting from an adverse market movement will not exceed a specific amount. The calculation predicts that there is only a 2.5% probability that the value of the portfolio will exceed the specific amount. Value-at-risk encompasses changes in all major risk components such as absolute price or rate change (delta), convexity (gamma), volatility (vega), time decay (theta), and discount rate (rho).

Another method, the equity attribution method, is designed to assess and manage all risks associated with derivatives and other products by attributing capital to products and profit centers based on assessed risk. This process evaluates overall risk and capital adequacy and further assesses risk versus reward profiles of various activities.

Stress test simulations are also frequently used to measure and manage market risk. Stress test methodologies tend to require complex mathematical models and extensive data bases; however, even the most sophisticated models are only as good as the assumptions implicit in the underlying data, and remain subject to individual interpretation.

3. SETTLEMENT RISK

Settlement risk is the exposure of loss arising when an institution either pays out funds or delivers assets before receiving assets or payment from its counterparty. As such, settlement risk can assume several forms. In today's global markets, few financial transactions are settled on a same-day basis, or simultaneously. As a result, one party could suffer a loss if the price of an instrument moved in its favor and the counterparty was not obliged, or refused to honor the agreement on the settlement date. Current netting provisions,[10] as well as those proposed by the Basle Committee on Banking Supervision[11] greatly reduce settlement risk issues.

4. OPERATING RISK

Operating risk is the risk that inadequate internal controls, procedures, human error, system failure, or fraud can result in unexpected losses. Among U.S. banks, only a few large institutions appear to have material exposures arising from activity in

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[10] Netting is defined as a written bilateral contract between two parties or more under which any obligation to each other to deliver securities, currency, or other assets on a given date is automatically amalgamated with all other obligations for the same asset, as of the same value date, in effect legally substituting one single net amount for the previous gross obligations. Netting is usually carried out as netting by novation (substitution of a new contract or obligation for an existing one, and the discharge of the existing obligation), in which existing obligations are rolled into a new master agreement for settlement of transactions.

[11] The Basle Committee on Banking Supervision is a Committee of banking supervisory authorities which was established by the central bank Governors of the Group of Ten countries in 1975. It consists of senior representatives of bank supervisory authorities and central banks from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, Netherlands, Sweden, Switzerland, United Kingdom, and the United States. It usually meets at the Bank for International Settlements in Basle.

See also Section E.4.a.(2)(c)(i) of this Report.

the derivative markets. These financial institutions currently have capital bases large enough to absorb sizable derivative losses. Moreover, the concentration of derivative activities in only a few large institutions facilitates supervision of their activities.

Several issues are important to reducing and controlling operating risk. First and foremost, oversight of informed and involved senior management is critical. This has been the leading recommendation on the part of market participants and industry sources to improve the efficiency of the derivatives markets. Second, entities either dealing or using derivatives must have the systems necessary to keep pace with the markets. In the rapidly changing world of derivatives, new product innovations are on the verge of, or actually are in some instances, outdistancing the ability of systems and technology to keep pace. Third, related to systems, the operations of market participants need to be up to par given the rapidly changing nature of the markets. Operations encompasses documentation, new product development, policies, procedures and guidelines, and other "back-office" processes. Fourth, controls are critical to the derivatives business. The primary element of control lies in the organization itself. It is the role of management to ensure that the conduct of activity be consistent with delegated authority. The fifth critical issue related to operating risk is the audit function. Internal auditing plays an important role in the procedures and control framework by providing an independent assessment of the effectiveness of the framework. The principal challenge for management is to ensure that the internal audit staff has sufficient expertise to carry out work in both the front and back offices. Considerable investment in training is needed to ensure that staff understands the nature and characteristics of the instruments being transacted.

5. MARKET LIQUIDITY RISK

Market liquidity risk is the risk that a financial asset or off-balance sheet instrument cannot be sold or replaced quickly at, or very close to, its fundamental value. Exchange-traded derivatives are less subject to market liquidity risk than are OTC-traded derivatives because of their use as standardized contracts and the settlement role of the clearinghouse. It is widely accepted that liquidity risk is of greater consequence the greater a firm's involvement in the derivatives business, the greater its reliance on short-term funding, the lower its credit standing, and the more restricted its access to central bank discount or borrowing facilities.

6. LEGAL RISK

The most significant losses to date in derivative markets have resulted from legal risk. For example, a number of participants in the swap markets suffered losses on contracts with local authorities in the United Kingdom recently when those

jurisdictions were found to be without authority to enter into swap contracts.[12] In the U.S., a significant source of legal risk has been the potential application of the off-exchange trading prohibition of the Commodity Exchange Act (CEA). After initially indicating that swap contracts would be subject to provisions of the CEA, the CFTC issued a policy statement in 1989 indicating that swap agreements meeting certain conditions would not be considered to be illegal futures.[13]

Another source of concern on this topic relates to the legal enforceability of netting provisions (agreed offsetting of positions or obligations by trading partners or participants in a system) under which exposures from multiple derivative transactions are netted. The Basle Committee on Banking Supervision recently issued a package of supervisory proposals dealing with netting provisions. Given questions about legal enforceability, concerns have been raised about the Basle Proposal and its weakening of capital requirements.

There are five principal enforceability risks which can occur at different stages of an OTC derivative transaction.

a. Contract Formation: The Statute of Frauds: Due to the growth in derivatives activity over the last 10 years, documentation was often delayed -- a problem known as "backlog." In the early days of derivatives, documentation backlog became commonplace and some transactions went undocumented for long periods of time. This created a legal risk that a counterparty with unrealized losses could disaffirm the transaction before a writing was executed by asserting the Statute of Frauds.[14] Laws in England, France, Germany, and the Canadian provinces of British Columbia and Quebec, for example, do not require that a contract for a derivative transaction take

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[12] In January 1991, the U.K. House of Lords held that the London Borough of Hammersmith and Fulham lacked the necessary capacity to enter into interest rate swap contracts it had entered into during the 1980s, and therefore was not liable to make payments on those contracts on which it would otherwise have suffered large losses. The losses suffered by swap dealers as a result of this decision are estimated to represent over 50% of total losses due to defaults on swaps since the inception of swap activity (the decision emphasizes the desirability of clear legal authority as to the capacity of parties to enter into derivatives transactions). The Local Government Act 1972, from which local authorities derive their powers, does not include any express power for local authorities to enter into derivatives transactions and the House of Lords found no implied powers whether for hedging purposes or otherwise. Prior to the House of Lords decision, the question of the capacity of local authorities to enter into swaps had been discussed with certain regulatory bodies and with legal counsel, and a not uncommon view was that local authorities had the capacity to enter into swaps as a risk management tool in certain circumstances.

[13] On January 14, 1993, the CFTC adopted two separate sets of regulations that exempt swap agreements (as defined in Section 101 of the U.S. Bankruptcy Code) and hybrid instruments (the regulations define "hybrid instrument" as an instrument that is an "equity or debt security or depository instrument...with one or more commodity-dependent components that have payment features similar to commodity futures or commodity option contracts or combinations thereof") from the Commodity Exchange Act (CEA). The regulations were adopted pursuant to the authority granted to the CFTC under the Futures Trading Practices Act of 1992 (FTPA) to provide exemptions from the CEA for futures contracts and transactions that may have futures-like elements, including swap agreements, hybrid instruments, forward contracts, and bank deposits. The FTPA also provides an express preemption of state "bucket shop" and gaming laws for transactions covered by the terms of the exemption. Therefore, the exemptions provide valuable legal certainty which should be sought in jurisdictions where the legality of derivatives transactions remains an issue (these exemptions would not appear to apply to derivatives transactions that are equity indexed.

[14] The Statute of Frauds is the common designation of a very celebrated English statute, passed in 1677, which has been adopted, in more or less modified form, in nearly all of the United States. Its chief characteristic is the provision that no suit or action shall be maintained on certain classes of contracts or engagements unless there shall be a note or memorandum thereof in writing signed by the party to be charged or by his authorized agent (e.g., contracts for the sale of goods priced at $500 or more; and contracts for the sale of land). Its object was to close the door to numerous frauds and perjuries. It is more fully known as the "statute of frauds and perjuries."

any particular form (i.e., an oral agreement is sufficient). New York, however, has two different provisions that require a writing (i.e., two different statute of fraud provisions).

b. **Capacity:** Capacity is generally defined as a borrower's ability to pay an obligation when due. Numerous entities use derivative transactions to manage financial risks, and capacity concerns regarding derivatives are not particularly relevant for major corporations and financial institutions. However, the issue does arise in relation to agreements with other entities such as state and local governments. In this case, questions may arise as to whether that entity, or the person representing the entity, has the capacity to enter into such a transaction or whether the transaction is beyond its capacity (i.e., ultra vires).

c. **Early Termination:** According to market participants, another area presenting major legal enforceability concerns is early termination. The specific issue is whether the non-defaulting party to a derivative master agreement would be able to enforce the provisions entitling it to terminate the agreement and net out or offset termination values and payment amounts (i.e., close-out netting) upon the bankruptcy, insolvency or liquidation of its counterparty. The U.S Bankruptcy Code, FIRREA and FDICIA all contain provisions regarding the netting of obligations between financial market participants in the event that one of the participants fails. Regulators have suggested that it may be desirable to have a single standard as to what types of netting contracts are covered. Uniformity would help provide certainty to financial market participants regarding the extent of netting coverage.

d. **Multibranch and Multiproduct Netting Arrangements:** Banks use multibranch master agreements to "book" individual derivative transactions through any branch designated in the agreement. The use of such master agreements involves the issue of whether upon the insolvency of a counterparty, parties to a multibranch master agreement can terminate that agreement and net across branches to achieve one net amount owed by or to a counterparty. In addition, if a party seeks to net across product types, there is uncertainty as to whether the master agreements should be treated as one single executory contract which can be immediately terminated. If the agreements are treated as separate executory contracts, there is a risk of selective repudiation and added uncertainty and delay.

e. **Legality/Enforceability of Derivatives Transactions:** In some jurisdictions, issues exist relating to the general legality or enforceability of derivative transactions. Brazil, Canada, Japan, and Singapore each indicates that issues exist whether swaps or other derivative transactions could be deemed gambling contracts, and thus illegal or unenforceable. In Australia, it is a recognized concern that a derivative contract may be classified as a gaming or wagering contract and thus invalid, because state and territory legislation does not define the terms "gaming" or "wagering." In the United States, specifically in New York, three statutes bear on the legality issue with respect to gambling. The first, a criminal statute, proscribes the act of "promoting gambling;" the second, also a criminal statute, proscribes operating a "bucket shop" (i.e., selling cash-settled option contracts); and the third statute voids all contracts for wagering on

a contingent event. There was once a risk that a court might use one of these three statutes to invalidate a swap agreement; however, the exemptions from the Commodity Exchange Act provided to swap agreements and hybrid instruments substantially reduce this concern.

Legal risks for the derivative markets are still significant despite progress toward establishing legal certainty. Banks have taken steps to limit potential legal risks by obtaining opinions of counsel that counterparties have legal authority to enter into contracts and by strengthening due diligence reviews of counterparties. Banks and other market participants also are working together through an industry trade group, the International Swaps and Derivatives Association (ISDA), to address common legal concerns. It is important to remember that because much of the derivative products markets is relatively young, many legal uncertainties exist regarding these instruments.

7. AGGREGATION OR INTERCONNECTION RISK

Interconnection risk results from the interaction of positions in one instrument with other positions, both in derivative products and in the underlying asset markets. These interactions frequently involve both cross-border and cross-market links and a wide range of individual financial instruments. Multi-legged derivative positions are growing rapidly, both in size, variety and complexity. Transactions can now involve different types of derivative instruments packaged into one product. Because of the increasing prevalence of these positions, a major default or disruption may not be isolated as easily as was once the case. Interconnection risk can also be seen as one basic element that could lead to systemic risk.

8. SYSTEMIC RISK

Systemic risk is the risk that a disruption by any participant or group of participants causes widespread difficulties at other firms, in other segments, or in the financial system as a whole. The rapid growth of global derivative transactions has led industry sources to question whether this activity might increase systemic risks in the financial markets or complicate the efforts of supervisors to deal with systemic disturbances. A complete evaluation of the contribution of derivatives to the economy must consider these potential consequences and assess their likelihood and significance. Since some systemic risk arises in the course of ordinary market activities, it can never be completely eliminated.

There is no general agreement as to which aspects of derivative activities pose the greatest systemic concerns. Relevant issues to systemic risk, according to industry experts and market participants, are mostly the same risks related to traditional financial instruments.

a. Possible Sources of Systemic Risk

(1) The Size and Complexity of Derivatives Activity: Derivative activities are clearly large, but still modest in size relative to activities in other markets. Its complexity, which is a reflection of the equally complex risks in the real economy, would merit concern if it outstripped participants' ability to evaluate and manage the attendant risks. There is much evidence to the contrary. Most dealers have gone to great lengths to establish sophisticated techniques to manage their derivative exposures with considerable precision; many are extending the benefits of these techniques.

(2) Concentration of Activity Among a Relatively Small Number of Institutions: The geographic diversity of dealers and the different types of institutions acting as dealers considerably reduce the level of concentration, both within countries and for a group of institutions (e.g., banks). A survey based on available data from annual reports of dealers indicates that the top eight dealers accounted for 58% of the interest rate and currency swap markets at year-end 1991.[15] No firm in that survey had over a 10% share of the market.

(3) Lack of Transparency: This is mentioned in the context of internal management reporting, external financial reporting, or the collection of industry data. As to the first aspect, many participants, especially dealers, mark their derivative positions to market on a daily basis for risk management purposes, an important step towards transparency. Financial reporting is one area where the institutional framework -- accounting standards and reporting requirements -- has not kept up with the development of derivatives. This is clearly an area where improvements are needed. Recommendations on the part of industry experts call on participants to voluntarily adopt accounting and disclosure practices for international harmonization and greater transparency, pending the arrival of international standards. This may be an area of particular interest to legislators.

(4) Illiquidity: The liquidity of derivative transactions has been successfully tested in several situations of failures by large participants. By moving from the management of individual positions to the management of components of market risk, derivative dealers appear to have been able to move beyond product liquidity to risk liquidity: a customized swap may appear to be illiquid, but if its component risks are liquid, then dealers will be willing to provide liquidity. Positions can become illiquid, however, particularly in a crisis.

(5) Settlement Risk: Relative to the settlement risk of foreign exchange transactions, which is very large given the volumes involved, the settlement risk of derivatives appears to be modest. Such risk is further reduced for settlements in a single currency by the netting provisions that are standard in derivative contracts.

(6) Credit Risk: The amount of credit losses incurred in derivative activities

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[15] Source: The World's Major Swap Dealers, Swaps Monitor Publications, Inc., November 1992.

has been very low. In fact, the rate of credit losses in derivatives compared with loss rates for traditional banking products indicates that by participating in derivative activities, bank dealers have increased the average credit quality and diversity of risk to which they are exposed.

(7) Unregulated Entities: Unregulated entities -- such as affiliates of U.S. broker-dealers or of insurance companies, and certain non-financial firms -- have prompted increased competition and innovation of products, but could lead to increased risk to regulated dealers or increased systemic risk. Participants evaluate for themselves the risks and benefits of trading with unregulated entities.

(8) Market Linkages: Derivatives have increased market linkages by intermediating markets efficiently and by providing effective risk management tools to facilitate the operation of global businesses. At the same time, there is concern that by fostering these linkages, derivatives make it possible for shocks to be transmitted faster and further than was possible before.

(9) Legal Risks: Despite efforts to reduce legal risks, they remain significant and have the potential to create systemic problems. Market participants and research indicates that derivatives appear to pose no significantly greater systemic threat than other financial activities to the financial system. However, there is no room for complacency. Among U.S. banks, it is widely accepted that only a few large institutions appear to have material exposures arising from activity in the derivative products markets. Most of them are perceived by the market to present little credit risk and, in practice, they all have sophisticated risk management procedures and capital bases large enough to absorb sizable derivative product losses. In addition, the concentration of derivative activities in only a few large institutions facilitates supervision of their activities. The failure of one of these institutions as a result of derivative products appears unlikely in the current risk environment.

Brian Quinn, Executive Director of the Bank of England, discussed the issue of systemic risk before the Group of Thirty on September 27, 1993, at the Federal Reserve in Washington, D.C. Mr. Quinn emphasized that complacency is not in order regarding this issue, and that past experience (little evidence of market disturbances causing systemic risk) is not a good indicator or measure for future reference, particularly for a market which is growing so rapidly.

9. CREDIT RATING AGENCY ASSESSMENT OF DERIVATIVE RISK

The Minority Staff has met with both Moody's and Standard and Poor's, the two leading independent credit rating agencies. Credit rating agencies are particularly interested in the derivative activities of banks and securities firms because of the impact derivatives have on the credit quality of the entities they rate. For example, since derivatives don't show up on balance sheets, and extensive standardized supplemental reports on these instruments have not yet been put into place, it is

unclear exactly how, and to what extent, the credit quality and financial condition of firms is affected by derivative activities. This often leaves everyone from accountants to analysts, investors, and regulators guessing about the risks being taken by an institution.

a. Moody's Investors Service

The goal of Moody's analysis, where derivatives are concerned, is to form a subjective opinion about the effect derivatives have upon the credit quality of an entity they rate. They look at derivatives in two principal contexts: • How derivatives are used to hedge against, for example, liabilities or foreign cash flows, and • How derivatives are used to assume speculative risks. Their focus in rating firms revolves around the degree to which firms use derivatives to hedge risks inherent in their business and the degree to which they use derivatives to speculate. Moody's does not have one particular set of ratios or mathematical formulas that can dictate an opinion. Rather, Moody's forms an opinion about an entity's appetite for risk and the systems they have in place to monitor, report, and control the risk of derivatives at that entity.

Moody's approach to analysis of derivative risk involves four main areas: **(1) Overview:** The goal here is to understand the purpose of the entity's derivative activity. For example, are derivatives entered into to gain fee income from customer orders, or are they entered into to take market positions? **(2) Market Risk:** After the overview, Moody's explores with management the valuation methods and market variables entities use to account for market risks. Estimation of how values can fluctuate with changes in market variables is a very difficult issue to pinpoint, and Moody's puts special emphasis on the factors used to make these estimations. Overall, Moody's examines whether the sophistication of an entity's analytical approach matches the depth of its involvement in the derivative markets and the complexity of its positions. **(3) Credit Risk:** Analytical issues for credit risks are complicated by netting. The problem is one of both system capability and legal enforceability. As a systems problem, one issue is how easily and quickly all transactions with a particular counterparty can be aggregated together into a single net credit exposure. **(4) Operating Risk:** As part of Moody's evaluation of operating risk, they focus on accounting, compliance and controls, and also on the level of management's expertise and involvement in the entity's derivative business. All of these elements, often overshadowed by the importance of credit and market risks, are critical to the proper functioning of an entity, particularly where derivatives are concerned.

In concluding, Moody's points out that in the past, very few banks it rates have been materially affected by their derivative activities except in a positive way. They believe that it will be quite rare that derivative activity will threaten the credit quality of an institution and added that they do not think that derivatives are a ticking time bomb for the banking industry as a whole. Moody's has never changed an institution's rating solely on the basis of its derivative activity. They feel that derivatives are usually used by financial institutions to produce income in ways that assume risks similar to the risks already undertaken by the financial institution in its

other activities.

b. Standard & Poor's Corporation

Given that derivative instruments are new, that they have not been tested through a wide variety of stress scenarios, and that they can be very complicated in nature, Standard & Poor's (S&P) is concerned that there is potential for some unforeseen danger in these markets. S&P recognizes that potential for increased risks always exists in new businesses, but after its current analysis of derivative activities of banks, it is not worried and does not anticipate problems at this time. The primary reason for this is that the risks inherent in derivatives are the same risks that banks have long dealt with in other basic lines of business, such as lending, treasury and trading operations. Derivative risks, in the opinion of S&P, appear to be quantifiable and manageable.

C. SUITABILITY

Suitability rules are guidelines that those selling sophisticated and potentially risky financial products, such as financial derivatives, must follow to ensure that investors have the financial means, information, knowledge and awareness to assume the risks involved. Suitability is a very important issue for the financial derivative markets given the magnitude and complexity of the markets, and the low level of understanding and various misconceptions of the instruments used in these markets.

The rules generally require that the investor in the financial product have **1.** A certain level of net worth and liquid assets so that they will not be irreparably harmed if the investment loses value, and **2.** A certain level of knowledge about the financial product(s) in question, and a sufficient degree of awareness of the purposes and risks associated with the financial product(s).

The Office of the Comptroller of the Currency (OCC) has recently released Banking Circular 277: Risk Management of Financial Derivatives. The circular provides guidelines for OCC-supervised entities regarding their derivative activities. Within these guidelines are suitability-type recommendations to provide that national banks use derivatives with caution and for appropriate purposes.

D. CLEARINGHOUSE PROPOSALS FOR THE SWAPS MARKETS

Properly defined, a clearinghouse arrangement is a mechanism for calculation of mutual positions within a group of participants with a view to facilitating the settlement of their mutual obligations on a net basis. Currently, only exchange markets are served by clearinghouse arrangements. While establishment of some form of properly structured clearinghouse arrangement primarily for the swaps markets[16] is more or less desirable on the part of dealers, end-users and regulators, the notion of establishing a traditional clearinghouse mechanism (similar to the one presently serving the exchange markets) has met with considerable criticism. Parting from the other regulators, the SEC suggested that the establishment of one or more clearinghouses that specialize in the processing of trades in swaps may improve the current regulatory framework for the swaps market by helping to ensure the legal certainty of swaps transactions and by improving settlement efficiency through payment netting. The SEC stated that while there are regulatory issues involved in the establishment of a swaps clearinghouse, regulators should actively evaluate the development of such facilities.[17]

1. CURRENT EXCHANGE MARKET CLEARINGHOUSE SYSTEM

Currently, only the exchange markets have a clearinghouse mechanism in place. This mechanism performs such functions as position or contract valuation on a daily basis, and calling, receiving and posting of margin, or collateral requirements. Positions in exchange markets are always matched; the clearinghouse serves to bring counterparties together, to match their needs, and to provide transactional and other technical services. In the current exchange markets, the counterparty or the exchange itself is always the clearinghouse. The customer is never concerned with whom the opposite side of the agreement is, and doesn't bother with the technical aspects of an agreement such as margin, payment or settlement. The primary purpose of a clearinghouse is to prevent participants from having to ascertain and verify the creditworthiness of their counterparties.

2. BIS CLEARING PROPOSAL

The BIS clearinghouse proposal is designed to extend the benefits of netting to cover contracts which originate with any of a group of counterparties that participate in the netting arrangement, instead of with just a single counterparty as in bilateral netting. This can be achieved in practice by netting all transactions that originate

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[16] Clearinghouse proposals discussed in this Report are those directed primarily at the swaps markets. Market participants indicate that a properly designed clearinghouse proposal for the swaps markets could eventually extend to other OTC derivative instruments.

[17] Source: SEC responses.

bilaterally through a central counterparty, or a clearinghouse. The BIS proposal is commonly referred to as multilateral netting, or full clearinghouse offset.

The result of the BIS clearing proposal netting will be that for every eligible transaction agreed upon by a pair of members, the clearinghouse would be interposed as the common legal counterparty to each member, and the members would have no obligations towards each other under the deal. This is similar to the clearinghouse system currently in place for the exchange markets. In the Basle Committee proposal, for each member of the clearinghouse, multiple transactions that originate with many counterparties can be amalgamated and netted. As a result, exposures would generally be a fraction of those that would arise in a non-netting environment.

3. COLLATERAL SETTLEMENT PROPOSAL

The collateral settlement proposal, while satisfying numerous aspects of a full clearinghouse arrangement, would not impose a "middleman" as in the exchange market clearinghouse system. Rather, a third entity, not party to the transaction, would be established to perform certain technical functions such as trade matching, contract valuation, and receiving and posting of collateral requirements.

This proposal would allow control of collateral and credit exposure in an organized and efficient manner. The primary positive aspect of clearinghouse offset, the reduction of credit exposure, would be provided under this proposal, as the third party agent would independently collect collateral for each transaction; the risk of default is secured, unlike the unsecured risk found in the exchange market clearinghouse system where the exchange has some responsibility to members. At the same time, some of the negative aspects of imposing a full clearinghouse system are avoided. For example, the custom-tailoring provision found in OTC markets, and in swap transactions, would still be available to participants, allowing them to construct and mold agreements as they see fit to accommodate their needs.

The collateral settlement proposal was floated in late 1991/early 1992, but has not been implemented to date. The main reason for this, market participants indicate, is the lack of a definite need for such a system, or any clearinghouse system, in the swaps markets. There are no active discussions at this time on implementing this proposal. Some have suggested, however, that implementation of this concept or a similarly structured plan, will likely take place in the next two to three years.

Although implementation of a full-blown clearinghouse system for the swaps markets appears very unlikely, end-users, dealers and regulators generally agree that some form of mild clearinghouse arrangement, such as this collateral settlement proposal or a similar system, will eventually be necessary.

4. PRIMARY BENEFITS AND DRAWBACKS OF A CLEARINGHOUSE SYSTEM

a. Primary Benefits

- Reduction/elimination of counterparty credit risk;
- Daily position/contract valuation;
- Calling, receiving and posting of collateral requirements;
- Execution of technical and administrative considerations, including data collection and trade matching;
- Provision of liquidity to the corresponding market;
- Allowance for increased competition in the markets by providing opportunities for smaller firms; and
- Provision for industry-wide trade confirmation policy.

b. Primary Drawbacks

- Loss of flexibility in designing derivative contracts;
- Allowance for numerous entities to participate in the markets, some of which may not be suitably qualified; and
- A clearinghouse arrangement could expose dealers to unquantified, and potentially large, failure risk (systemic risk issues).

Although there are both benefits and drawbacks in a clearinghouse mechanism, general consensus among market participants is that a clearinghouse arrangement only serves specific purposes and should not be implemented, as currently structured, for the swaps markets.

5. THE REGULATORY COMMUNITY

Similar to the case with market participants, there is a prevailing opinion general consensus among regulators that while clearinghouse arrangements have some merits, they should not be implemented in the swaps markets at this time. Regulators qualified this general conclusion by saying that a properly designed and properly implemented clearinghouse system could well serve the OTC markets, and it may make sense to consider such a proposal in the future. As noted before, the SEC stated that regulators should actively evaluate the development of clearinghouse facilities.

6. THE DEALER COMMUNITY

The dealer community is largely opposed to implementation of a clearinghouse mechanism for the swaps markets, with some dealers more vehemently opposed than others. There is agreement among dealers, however, that some form of mild clearinghouse is beneficial and perhaps necessary as the swaps markets evolve. Despite this mutual general acceptance, it is very unlikely that a push for

clearinghouse implementation will originate from the dealer community. Dealers themselves currently function, to a certain extent, as clearinghouses. They dominate the market and are naturally reluctant to have their power base and authority dispersed. Certain qualifications such as size, technical capability and capital adequacy are necessary to qualify as a dealer in these instruments; imposition of a clearinghouse will "socialize" the swaps market and allow lower-rated entities to participate in a highly lucrative market.

7. THE END-USER COMMUNITY

The end-user community widely recognizes that certain benefits are associated with implementation of a clearinghouse mechanism for the swaps markets, but indicated that they are overwhelmingly satisfied with the current system. Similar to dealers, various end-users expressed a favorable opinion toward some mild form of clearinghouse arrangement being associated with the swaps market at some point in the future. The push for implementation, however, will not likely come from the end-user community.

E. REGULATION OF THE FINANCIAL DERIVATIVE MARKETS

1. OVERVIEW

Derivative activities are governed by multiple types and levels of regulation, depending upon the product used, the manner in which it is used, and the type of entity involved. Often, for example, a single derivative transaction involves two counterparties regulated by different agencies, such as a bank regulated by the OCC and a securities firm regulated by the SEC. In another derivative transaction, an entity, such as a bank, utilizing an exchange-traded derivative is regulated by the OCC, where the derivative product is regulated by the CFTC.

2. REGULATION BY TYPE OF DERIVATIVE PRODUCT

a. OTC Derivatives: OTC derivatives are those which are not under the jurisdiction of the Commodity Futures Trading Commission (CFTC), including forwards, certain transactions in the interbank market, certain foreign currency transactions, and trade options; or have recently been exempted by the CFTC from its jurisdiction, namely swaps, certain hybrids, and certain energy contracts. In addition, any derivative considered a security would fall under the jurisdiction of the SEC. OTC derivatives are regulated primarily to the extent that regulatory agencies oversee the entities that utilize OTC derivatives. Certain OTC derivative activities are subject to anti-fraud and anti-manipulation regulations of the CFTC and SEC, regardless of the participant.

b. Exchange-Traded Derivatives: Exchange-traded derivatives are those which are traded on organized exchanges and are regulated by the CFTC, the SEC, and self-regulatory organizations. When financial institutions and other firms utilize exchange-traded derivatives, they are also subject to the regulation of their primary regulator. CFTC and SEC regulation includes imposition of capital requirements, margin requirements, trading limits, customer protection rules, anti-fraud and anti-manipulation rules, transparency, and market surveillance.

3. REGULATION BY TYPE OF ENTITY USING DERIVATIVES

a. Banking Agency Regulation: The banking regulators have several common measures in their regulation of derivatives; namely on- and off-site examinations, financial data, and market intelligence. The FED, OCC, FDIC, and the OTS exert their traditional jurisdiction over the derivative activities of the institutions they regulate.

b. FED: The FED is the regulator of bank holding companies, state-member banks and certain foreign entities. In addition to being regulated by the FED, state-member banks are chartered under state law and must have authority under their

state charters to engage in derivative transactions. According to industry sources, only four state-chartered banks are currently dealers in derivatives,[18] with the rest of the state banks being end-users.

c. **OCC:** The OCC is the regulator of national banks. The OCC recently issued guidelines on derivative activities of national banks. According to industry sources, six national banks are dealers in derivatives.[19] OCC Banking Circular 277, released on October 27, 1993, sets guidelines for the use of derivatives for banks acting in the capacity of either a dealer or an end-user, and sets forth certain suitability type provisions requiring a bank to analyze the impact of proposed derivative activities on the financial condition of the customer. In addition, on September 27, 1993, the OCC called for the creation of an interagency task force to address the involvement of U.S. banks in derivative financial products.

d. **FDIC:** The FDIC is the regulator of state non-member banks. According to the FDIC, state non-member banks use derivatives primarily in the context of hedging and portfolio management strategy, and currently do not act as dealers.

e. **OTS:** The OTS is the regulator of thrifts and thrift holding companies. According to the OTS, thrifts are end-users of derivatives and do not act as dealers. Thrifts that use derivatives are expected by the OTS to use them only for risk-reduction purposes.

f. **SEC:** The SEC has jurisdiction over the securities derivative activities of broker-dealers, in the capacity of both a dealer and an end user. The SEC has, in general, jurisdiction over derivatives which are considered "securities". The SEC has jurisdiction over certain exchange-traded derivative products which are traded on SEC-regulated exchanges and has jurisdiction over those exchanges. The SEC has jurisdiction over securities, including options on securities (including exempted securities), options on certificates of deposit, options on stock indexes, and options on foreign currencies traded on national securities exchanges. The SEC has rules governing fraud and manipulation, broker-dealer regulation, market regulation, capital requirements, margin requirements, and customer protection rules. The derivative dealing activities conducted in an unregistered (unregistered with the SEC) affiliate of broker-dealers are those activities interpreted by the securities firm not to be securities activities, which typically include most swaps, and certain other OTC derivative instruments. However, the SEC does monitor the risks posed by the activities of unregistered affiliates through its risk assessment program, pursuant to the Market Reform Act of 1990.

g. **CFTC:** Those entities that utilize exchange-traded derivatives under the

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[18] Bankers Trust; Morgan Guaranty Trust Co.; Chemical Bank; and Bank of New York. All are state-chartered in New York.

[19] Citibank, N.A.; Chase Manhattan Bank; Bank of America; First National Bank of Chicago; Continental Bank, N.A.; and NationsBank.

jurisdiction of the CFTC are subject to CFTC rules and regulations, in addition to the entities' primary regulator. The CFTC also has jurisdiction over those exchanges. In general, the CFTC regulates futures contracts and commodity options. The regulatory framework established by the CEA and the CFTC regulations addresses market integrity, financial integrity, and customer protection. The CFTC has jurisdiction over all futures contracts, including futures contracts on stock indices, over options on futures contracts, physical commodities, and foreign currencies. There is no trading in futures on individual securities. The CEA and the CFTC regulations regulate the futures and commodity option exchanges and their clearing facilities, the design of products traded, the persons soliciting or handling transactions for customers, as well as impose capital requirements, margin requirements, registration, trading limits, customer protection rules, anti-fraud and anti-manipulation rules. The CFTC requested the formation of an interagency council to study certain issues related to derivatives in its report on derivatives released on October 25, 1993 entitled OTC Derivative Markets and Their Regulation.

h. Insurance Companies: Insurance companies act as both end-users and dealers.[20] Insurance companies are regulated primarily at the state level. Insurance companies are also subject to product regulation by the CFTC and SEC when they use exchange-traded derivatives. The National Association of Insurance Commissioners (NAIC) is considering a Model Investment Law which, in Sections 23 and 41, would restrict the use of derivatives to hedging and limited income-generation transactions.

i. Investment Companies: Typically, institutional investors and investment companies, including mutual funds, use derivatives to hedge risks. For institutional investors covered under the Investment Company Act, namely investment companies, there exists restrictions on activities and disclosure requirements. The SEC under the Investment Company Act also requires investment companies to disclose the types of securities in which it invests, the instruments it uses, and the risks associated with such activities.

j. Unregulated Users of Derivatives: Corporate end-users of derivatives and certain so-called hedge funds are for all practical purposes unregulated end-users of derivatives. In addition, certain subsidiaries of broker-dealers and insurance companies that deal in various derivative products are, to a certain degree, unregulated, as they are unregistered with the SEC. However, to the extent that unregistered dealers and unregulated end-users, such as speculators, utilize exchange-traded derivatives, they are subject to CFTC and SEC speculative position limits. Entities such as corporations, pension plans and other unregulated institutional investors may be required to report investment holdings to federal or state regulators.

[20] Two insurance companies act as dealers, namely AIG and General Re.

4. CAPITAL STANDARDS

a. Banks and Thrifts

(1) Current Capital Standards: Current capital requirements for the derivative activities of banks and thrifts are governed by the standards of the Basle Accord that were published in 1988. These risk-based capital standards have been adopted by the regulatory agencies and applied to bank holding companies and state-member banks regulated by the Federal Reserve; national banks regulated by the OCC; state non-member banks regulated by the FDIC; and thrifts regulated by the OTS.

The existing capital adequacy standards address the credit risk associated with an institution's on- and off-balance sheet activities, including those relating to derivative instruments. The current risk-based capital standards require that insured institutions hold capital against the credit equivalent amount for an off-balance sheet item. The credit equivalent amount is composed of the present credit exposure plus the potential future credit exposure. The present credit exposure is the mark-to-market value of the derivative instrument, and represents the replacement cost of the derivative (the amount it would cost, if any, for an institution to replace the contract in the current market environment if the counterparty were to default). The potential future credit exposure is the notional amount of the derivative multiplied by a risk factor of 0-5%, depending upon the type of contract that is involved. The credit equivalent amount is multiplied by the proper risk-weight, up to 50%, based on the identity of the counterparty to the contract or the nature of the collateral.

It is important to note that in addition to the Basle risk-based capital standards, U.S. regulators have imposed a leverage capital standard on banks and thrifts. As of February 1991, leverage capital is based solely on a ratio of Tier 1[21] (or core) capital to total assets. The most highly-rated banks in terms of safety and soundness (i.e., those rated composite 1 under the CAMEL system[22]) that are not anticipating or experiencing significant growth are required to meet a minimum Tier 1 leverage capital ratio of at least 3%. All other banks are required to meet a minimum Tier 1 leverage capital ratio of at least 100 to 200 basis points above the 3% level -- that is, an absolute minimum leverage ratio of at least 4%.

Some have suggested that the risk-based capital ratio should substitute for the leverage ratio. However, regulators generally maintain that both ratios are useful. The FDIC has stated that a simpler leverage ratio may be preferable to the more

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[21] Tier 1 capital may be thought of as a close approximation to pure, tangible equity that is available to absorb unexpected losses. Tier 1 capital includes common stock, retained earnings, and perpetual preferred stock and goodwill acquired before March 1988.

[22] The CAMEL rating is a measure of the relative soundness of a bank. The term stands for a composite rating based on Capital, Asset, Management, Earnings, and Liquidity. CAMEL ratings are calculated on a scale of 1-5, and are used by bank supervisory agencies to evaluate a bank's conditions. A rating of 1 is given to banks with the strongest performance ratings. Banks given a 4 or 5 rating are placed on the watch list of banks in need of supervisory attention.

complicated risk-based standard.[23]

(2) Proposed Capital Standards: Proposed new capital requirements for off-balance sheet instruments and activities are being discussed both on an interagency and international basis:

(a) Banking Agency Proposal for Interest Rate Risk: The OCC, FDIC, and the FED issued for comment, pursuant to Section 305 of FDICIA, a proposal which would establish procedures for measuring banks' interest rate risk (IRR) exposures and determining the amount of capital that may be needed. The proposed rulemaking solicits comment on two alternative methods. The "Minimum Capital Standard" approach would impose an explicit minimum capital charge based on the amount of IRR exposure above a threshold. The "Risk Assessment Method" would assess the need for capital for IRR on a case-by-case basis. Institutions with few derivative activities would be exempt. Increased Call Report disclosure of off-balance sheet activities, including derivatives, would be required under the proposal.

(b) OCC Proposal on Collateralized Transactions: The OCC published a proposed rule which would amend the capital requirements to lower the risk weight from 20% to 0% for particular transactions that are collateralized by cash or government securities.

(c) Basle Committee Proposals: In April 1993, the Basle Committee on Banking Supervision, (the Committee) under the Chairmanship of E. Gerald Corrigan, former President of the Federal Reserve Bank of New York, issued a package of supervisory proposals dealing with netting and market risks, together with an approach for the measurement of interest rate risk. Comments are due on the Basle proposals by December 31, 1993.

Unlike the market risk and netting proposals, the proposals for interest rate risk do not involve capital charges because they address only the measurement of interest rate risk. Interest rate risk is a significant risk which banks and their supervisors need to monitor carefully. Unfortunately, many difficult measurement problems are associated with interest rate risk and it was the intention of the Basle Committee to develop a measurement system rather than an explicit capital charge for interest rate risk. The Basle Committee holds the view that the existing capital requirements can be regarded as providing adequate protection against interest rate risk exposure in most situations. The measurement system is designed to identify institutions that may be incurring extraordinarily large amounts of interest rate risk.

(i) BIS Proposal for a change in the Supervisory Recognition of Netting

- The Basle Committee proposal amends the Basle Capital Accord in

[23] Minority Staff Report, "Bank and Thrift Capital," House Banking Committee, April 1993.

order to recognize certain bilateral netting arrangements in the measurement of credit risk associated with certain classes of financial instruments.

- The Basle Committee proposal defines the precise conditions under which banks would be permitted to net the credit risks arising from trading in certain financial instruments under the Basle Capital Accord.

- The Basle Committee proposal indicates preliminary thinking as to the conditions under which multilateral netting might be recognized for capital measurement purposes at some future date.

The FDIC stated that recognition of bilateral and multilateral netting arrangements and immediate reflection of these in capital adequacy standards will have the effect of significantly reducing the amount of regulatory capital without a clear, commensurate decrease in credit risk, unless the legal uncertainties have been clarified.

(ii) BIS Proposal for the Supervisory Treatment of Market Risks

- The Basle Committee proposal would set forth a framework to modify the Basle Accord by providing explicit capital charges for the risks associated with price changes in open positions (market risks). Until now, the Accord only provided for explicit capital charges for credit risk.

- The Basle Committee proposal could result in a higher or lower aggregate capital requirement for institutions, depending on the risk profile of each.

- The Basle Committee proposal is a further step in the direction of greater convergence in supervisory policies across national boundaries and across various classes of financial instruments.

(iii) BIS Proposal on Interest Rate Risk

The 1988 Basle Accord, which came into full effect at the end of 1992, established minimum risk-based capital standards for internationally active banks. Following adoption of the Accord, representatives from Basle Committee member countries have been working to develop ways of assessing a bank's overall exposure to changing interest rates and to a variety of other so-called market risks (see above). Changes in interest rates may not only affect an institution's current earnings, but also its future earnings and the economic value of its capital, reflecting changes in the value of the institution's financial instruments. For a bank with liabilities carrying interest rates which change faster than those on its assets, its net present value will decline if interest rates rise. Measuring that risk is the focus of the Basle Committee interest rate risk proposals.

The Basle Committee is not proposing a common international capital standard for interest rate risk. Rather, its efforts are being focused on the development of a measurement system which supervisors could use for observation purposes and a means for identifying "outliers," leaving each authority free to decide how to respond in the case of institutions identified as high risk. As a first step to alleviate interest rate risk measurement difficulties, the Basle Committee is seeking to develop a consensus on a common reporting framework which would allow national supervisory authorities to collect consistent information and from which various measures of interest rate risk could be considered and ultimately constructed. The framework is designed to facilitate changes to the measurement of risk as a consensus emerges as to which measure or measures are to be preferred.

(d) Basle Sub-Group on Off-Balance Sheet Activities Proposal: The Sub-Group is also reviewing current risk-based treatment of derivatives for credit risk. In particular, the Sub-Group is reviewing the factors used to estimate potential future exposure.

b. Broker-Dealers

Broker-dealers engaged in securities activities are required to be registered with the SEC and are subject to SEC rules that require, among other things, maintenance of certain specified minimum levels of capital (Net Capital Rule).[24] Derivative activities which take place in unregistered affiliates, including offshore affiliates, are not subject to this rule. Net capital is defined as a broker-dealer's net worth computed in accordance with Generally Accepted Accounting Principles (GAAP), plus satisfactory subordinated liabilities, less assets not readily convertible into cash and most unsecured receivables. The broker-dealer then subtracts prescribed percentages (or haircuts[25]) from the market value of its securities and commodities positions to account for market and credit risk. The rule also requires broker-dealers to mark their securities and commodities positions to market on a daily basis.

Although the Net Capital Rule contains treatment for derivative product transactions, much of the rule's current structure was developed prior to the recent growth and development of the OTC derivative markets. The SEC has been informed by certain broker-dealers that the capital requirements necessary to conduct OTC derivative activities in registered versus unregistered broker-dealers is one factor, among others, that has encouraged certain derivative activities to be conducted in unregistered affiliates. This was confirmed in meetings the Minority Staff had with market participants. Under the Net Capital Rule, the unrealized profit associated with an OTC derivative, generally, is treated as an unsecured receivable subject to a

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[24] The Net Capital Rule is an SEC requirement that member firms as well as nonmember broker-dealers in securities maintain a maximum ratio of indebtedness to liquid capital of 15 to 1. Indebtedness covers all money owed to a firm, including margin loans and commitments to purchase securities. Liquid capital includes cash and assets easily converted into cash.

[25] A "haircut" is a deduction taken in a firm's capital computation in order to account of specific risks and uncertainties and is enumerated in regulatory capital rules. The intended regulatory result is that a firm's capital, after the deduction of all required haircuts, will be the amount of liquid capital a firms has, after a reserve has been set aside of market contingencies.

100% capital charge. The SEC, therefore, is considering different approaches to evaluate whether the Net Capital Rule should be modified in light of developments in the derivative markets generally, and the OTC markets in particular. One approach would devise capital requirements that comprehensively address the credit and market risks posed by derivative products so that firms could conduct their derivative activities in registered broker-dealers without what they often regard as undue capital constraints. Another approach would be to formulate separate capital guidelines that would specifically apply to separately capitalized subsidiaries that are registered broker-dealers.

c. CFTC Requirements

To protect customers' funds, the CFTC sets minimum net capital financial requirements for all firms and persons who handle customer funds. For example, the CFTC follows the SEC haircuts for the market risk of proprietary positions in instruments subject to SEC jurisdiction. The CFTC currently does not permit those it regulates to grant OTC commodity options, and charges significant haircuts for forward contract obligations. The CFTC is exploring whether changes should be made in its minimum capital requirements or whether separate requirements should be adopted to accommodate certain types of OTC activity.

5. ACCOUNTING TREATMENT FOR FINANCIAL DERIVATIVES

Accounting issues are important to the financial derivative markets, and considerable time and effort on the part of industry participants and various associations has been expended to improve accounting standards and practices.

For example, the American Institute of Certified Public Accountants (AICPA) is currently in the process of revising the Audit and Accounting Guide for Brokers and Dealers in Securities. In May 1986, the FASB added a project on accounting for financial instruments to its agenda. Among the discussion memoranda and statements issued in connection with the project, several have notable relevance to derivative securities, particularly Statement No. 105, Disclosure of Information about Financial Instruments with Off-Balance Sheet Risk and Financial Instruments with Concentrations of Credit Risk (March 1990), and Statement No. 107, Disclosures about Fair Value of Financial Instruments (December 1991). These statements require disclosure of credit risk and fair value of derivatives.

The Financial Accounting Standards Board (FASB) has issued two statements addressing accounting for derivative securities: **a.** FASB Statement No. 52, Foreign Currency Translation, which addresses accounting for foreign exchange forward contracts (including currency swaps), and **b.** FASB Statement No. 80, Accounting for Futures Contracts, which addresses accounting for financial and commodity forward contracts excluding foreign exchange contracts covered by Statement No. 52. GAAP, required for purposes of Y-9C reports and annual reports dictated under Section 112 of FDICIA, require that certain off-balance sheet derivative instruments be marked-

to-market unless the instruments meet certain specified hedge accounting criteria. If these criteria are met, the gains or losses associated with the instrument can be deferred and realized on a basis consistent with the income or expense of the item hedged (hedge accounting). This hedge accounting framework is derived from FASB Statements 52 and 80. For a transaction to qualify as a hedge, the following criteria are usually applied:

- The position to be hedged and the hedging instrument are specifically identified and the relationship between them designated; and

- The hedging instrument is reasonably expected to be effective in reducing the risk of loss from changes in the value of the hedged instrument.

The effectiveness of the hedge should be monitored over time and if it ceases to be effective, hedge accounting should cease. Thus, hedge accounting is generally permitted in conjunction with a risk reduction strategy. If derivatives are used for any purpose(s) other than one whose goal is to reduce risks, mark-to-market or lower-of-cost-or-market (LOCOM) accounting is required.

Under Statement No. 80, use of hedge accounting requires the enterprise to perform an ongoing assessment of the effectiveness of the hedge throughout the life of the hedge. A significant difference between Statement No. 52 and Statement No. 80 is that No. 52 allows hedge accounting only for firm commitments, while No. 80 allows hedge accounting for anticipated probable transactions.

Many derivative products have developed for which no FASB Statements have been issued. In certain limited circumstances, guidance has been provided by the FASB through its Emerging Issues Task Force (EITF). Whether accounting methods for derivatives that are not addressed either by FASB Statements or an EITF issue consensus are acceptable depends on general accounting practice, and whether they are consistent with basic accounting tenets. Thus far, accounting principles applicable to derivatives have developed based largely on FASB Statement No. 52 and Statement No. 80.[26]

6. DISCLOSURE TREATMENT FOR FINANCIAL DERIVATIVES

Disclosure issues are as, if not more, important than accounting issues. Flaws in the quality and quantity of information relating to derivative products or derivative activities can potentially lead to systemic problems, abuse in the markets, and general destabilization. Disclosure is particularly important for the derivative markets and the instruments contained within these markets because they are powerful tools, poorly understood, and their use is rapidly becoming common practice for financial management and risk-reduction strategy purposes.

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[26] In March 1992, the Chief Accountant of the SEC sent a letter to EITF representatives to affirm the SEC's position that hedge accounting is applicable only to transactions that reduce risk.

There is widespread concern that organizations currently disclose too little information about their derivative transactions to present a fair assessment of the nature and extent of their activities or the risks to which they are exposed. It is interesting to note that certain dealers with whom the Minority Staff spoke have decided to disclose more than is currently required. These dealers feel that more disclosure has benefited them as the risks associated with their derivative activities is less than others might imagine in the absence of such disclosures. The use of derivatives can lead to risks which far exceed the amounts recognized on financial statements. For example, the inherent risk exposure in OTC transactions is only recorded on the balance sheet at a fraction of worth, or total exposure impact on the firm using the transaction. The remainder of the exposure risk is recorded off-balance sheet. This type of arrangement represents a contingent asset or liability, the amount of which will depend on the movement of the underlying financial instrument. Although regulations in many countries require footnote disclosure of capital commitments and contingencies, regulators and industry participants appear to provide too little disclosure about intrinsic off-balance sheet risks.

a. Views on Disclosure from the Regulatory Community

The primary regulatory financial statements for federally insured commercial banks and savings banks are the quarterly Reports of Condition and Income (Call Reports), and the quarterly Y-9C reports, filed by bank holding companies with the Federal Reserve. Both reports are required to be filed in a manner consistent with GAAP. Call and Y-9C reports, which are available to the public, disclose the notional values of foreign exchange and interest rate derivative instruments including swaps, futures and forward contracts, option contracts and similar contracts involving commodities and equities. Information on replacement costs are also collected in both reports for the purposes of calculating risk-based capital requirements.

In addition to these financial statements, the Federal Financial Institutions Examination Council (FFIEC) 035 report collects information on individual bank foreign exchange positions and is widely used by examiners as a supervisory tool. The 035 report is filed at the end of each month by approximately 125 banks, bank holding companies and foreign bank branches in the U.S. with $1 billion or more in foreign exchange commitments. The report includes information on foreign exchange activity in the six major currencies or currencies in which the reporter has a position greater than $50 million.

The existing reporting framework is supplemented by information gained through the regulatory examination process. However, the growing complexity of the derivative markets has caused regulators to re-examine their informational needs.[27] A number of enhancements and initiatives are being considered, as follows.

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[27] In particular, breaking down sources of income for banks and securities firms and matching income sources with different activities and financial instruments is a high priority for regulators. There are initiatives currently in place to require determination of and reporting of revenue for financial entities according to the precise source of such revenue.

(1) **Section 112 of FDICIA:** Beginning in 1994, reports filed pursuant to the mandate of Section 112 of FDICIA will provide additional insight into the derivative activities of banks and bank holding companies. Under Section 112, insured banks with total consolidated assets of $500 million or more will have to submit to the appropriate banking agencies annual reports containing audited financial statements prepared in accordance with GAAP; alternatively, consolidated financial statements can be filed by the bank holding company under certain circumstances. Banking organizations will disclose information about significant concentrations of credit risk from individual counterparties or groups of counterparties for all financial instruments, including derivatives. Banking organizations will also be required to disclose the fair value of financial instruments, including derivatives, for which it is practicable to estimate fair value. When estimating fair value is not practicable, the banks must disclose descriptive information pertinent to estimating the value of these instruments.

As part of the required audited annual reports, banks and bank holding companies will also be required to disclose additional information on their off-balance sheet financial instruments that have a risk of accounting loss. The information to be disclosed includes: the face, contract, or notional principal amount; the nature and terms of the instruments along with a discussion of their credit and market risk, cash requirements, and related accounting policies; the accounting loss the entity would incur if any party to the financial instrument defaults and the collateral or other security, if any, for the amount due proved to be of no value to the entity; and the entity's policy for requiring collateral or other security on financial instruments it accepts and a description of collateral on instruments presently held.

(2) **Section 305 of FDICIA:** On September 14, 1993, the federal banking agencies issued for public comment a Notice of Proposed Rulemaking on interest rate risk in response to Section 305 of FDICIA. The agencies are proposing that an interest rate risk schedule be incorporated into the current Call Reports. The proposal envisions that there would be revisions to the Call Report to permit the agencies to collect the information necessary to monitor the level of interest rate risk and assess the need for additional capital at banks that may have significant exposures to interest rate risk. The proposal also advances a specific treatment for assessing the interest rate risk of derivative activities in the context of the overall interest rate risk of a bank.

(3) **Section 308 of FDICIA:** Effective December 19, 1992, Regulation F implemented Section 308 of FDICIA, which required the FED to prescribe standards to limit the exposure of insured depository institutions to other depository institutions. As implemented, Regulation F requires banks, savings associations, and branches of foreign banks with deposits insured by the FDIC to develop and implement internal prudential policies and procedures for evaluating and controlling credit exposure to depository institutions with which

they do business.

(4) **FFIEC Proposal on Implementing Section 121 of FDICIA:** Section 121 of FDICIA requires that the federal banking and thrift agencies develop supplemental standards for disclosure of the fair market values of assets and liabilities of insured depository institutions. In April 1993, the agencies issued a proposal that would require institutions with total assets of $500 million or more to disclose the fair values (i.e., estimated market values) of their assets, liabilities, and off-balance sheet financial instruments in their audited annual reports. The FFIEC also released a proposal requesting comment on the feasibility of providing fair-value disclosures in bank Call Reports, perhaps using a condensed format. The agencies are currently reviewing the comments that the FFIEC received on this proposal.

(5) **Financial Accounting Standards Board Interpretation No. 39:** The federal banking agencies are considering adopting FASB Interpretation No. 39, Offsetting of Amounts Related to Certain Contracts, solely for balance sheet items arising from off-balance sheet derivative instruments. Adoption of FASB No. 39, which takes effect for financial statements issued for periods beginning after December 15, 1993, would improve the reporting of certain credit exposures arising from derivatives in bank Call Reports by clarifying the potential for inappropriate accounting netting practices. In addition, FASB No. 39 would permit entities to offset fair value amounts recognized for derivative contracts executed with the same counterparty under a master netting arrangement. If approved, the reporting guidance consistent with FASB No. 39 would become effective beginning with 1994 Call Reports.

b. Customer Disclosure Rules

In addition to suitability requirements as described previously, broker-dealers are required, pursuant to Rule 9b-1 under the Exchange Act and Form S-20 under the Securities Act of 1933, to provide customers with a risk disclosure document containing information describing the mechanics and risks of options trading, transaction costs, margin requirements, and the tax consequences of margin trading.

c. Views on Disclosure from Market Participants

Harmonization of international accounting standards is one of the issues most often cited by industry sources regarding disclosure in the financial derivative markets. Broader consistency in this area will clarify many of the current concerns surrounding this issue. Until then, however, industry sources have outlined several voluntary disclosure measures which would apply to all categories of financial instruments, derivatives included.[28] Such suggested measures are: (1) Qualitative information should be disclosed in the Management Discussion and Analysis (MD&A) of the

[28] Many of the following disclosures already appear in the financial statements of market participants, but very few make all the suggested disclosures.

annual report by dealers and end-users; (2) Accounting policies and quantitative information should be disclosed in the footnotes to the financial statements by dealers and end-users; and (3) Additional disclosure in the footnotes of dealers should include information such as details on regulatory capital, and an analysis of revenue relating to financial instruments.

d. Disclosure for Market Risk

Enhanced levels of disclosure[29] are desirable on the part of market participants, as they are reluctant to accept counterparties that do not provide a meaningful and representative measure of, and sufficient information regarding, their creditworthiness. However, there are a number of considerations which present significant challenges in disclosing exposures to market risk. One reason for this is the potential burden that such disclosure might entail.[30] Institutions may also have reservations about representing disclosure of market risk as the "appropriate level of risk" because such information may have shortcomings and reflect many assumptions made in the interest of minimizing regulatory burden. Nevertheless, difficulties associated with disclosure of market risk are not insurmountable, and the regulatory bodies generally believe that greater efforts need to be directed toward this aspect of financial disclosure. As one measure, FASB recently released Statement No. 107, Disclosures about Fair Value of Financial Instruments (December 1991), requiring enterprises to disclose the fair value of all financial instruments whether on- or off-balance sheet. Although FASB 107 does not require disclosure of the nature and terms of derivatives or other financial instruments, the fair value disclosures that are required provide an indication that the enterprise is exposed to market risk.

Securities and Exchange Commission regulations applicable to financial reporting exceed requirements under GAAP by requiring disclosure of information that is indicative of a registrant's market risk exposure from on-balance sheet items. For example, Article 5 of Regulation S-X requires disclosure of the general character of each type of short- and long-term debt instrument, including interest rate and maturity date. Industry Guide 3, which identifies certain statistical information that must be disclosed by financial institutions, requires disclosure of average balances of each major category of interest-bearing asset and liability, including disclosure of average and year-end yields on each major class of interest-bearing asset and liability. The information required by Regulation S-X and Industry Guide 3 provides insight into the market risk to which a registrant is exposed through its major on-balance sheet lending and investing activities. Additionally, Item 303 of Regulation S-K, Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A), requires registrants to discuss information about liquidity, capital resources, and results of operations that the registrant believes is necessary to an

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[29] Traditionally, GAAP has not required disclosure of information that would facilitate evaluation of market risk exposure.

[30] Particularly for banking or other financial institutions that make little or no use of derivative instruments. The FED stated that care is being taken to ensure that any reporting changes are appropriately targeted and do not cause undue reporting burdens. On the other hand, the FED noted that financial institutions with a notional value of derivative contracts in excess of 10% of assets would be required to report expanded data to enhance the supervisory assessment of market risk.

understanding of its financial condition, cash flows, and results of operations. This very broad requirement is intended to elicit disclosure about transactions or other factors which are not required by GAAP. Specifically, Item 303(a)(3)(ii) requires registrants to "describe any known trends or uncertainties that have had or that the registrant reasonably expects will have a material favorable or unfavorable impact on net sales or revenues or income from continuing operations." This provision would require a registrant to disclose the existence of derivatives that are reasonably expected to have a material impact on future income.

7. TAX ISSUES

Concerns have been raised that certain tax laws and regulations disadvantage the use of derivatives in risk management strategies. Tax impediments include the inconsistent or uncertain tax treatment of gains and losses for derivative transactions, in comparison with the gains and losses treatment from the risks being managed by other means.

F. SUPERVISORY PROPOSALS FOR FINANCIAL DERIVATIVES

Several supervisory proposals are currently being considered related to derivatives. A summary of these proposals includes:

1. BASLE COMMITTEE PROPOSALS

In April 1993, the Basle Committee on Banking Supervision issued a package of supervisory proposals dealing with netting and market risks, together with an approach for the measurement of interest rate risk.[31]

2. BANKING AGENCY PROPOSALS

The banking agencies (the FED, the OCC, the FDIC and the OTS) have issued various proposals relating to derivatives. Such proposals include those which would implement: **a.** Section 112 of FDICIA regarding disclosure of instruments that could result in an accounting loss; **b.** Section 305 of FDICIA, both capital and disclosure relating to interest rate risk; **c.** Section 121 of FDICIA, the FFIEC proposal regarding the disclosure of fair market value; **d.** FASB Interpretation No. 39 regarding netting; and **e.** OCC proposed capital rule regarding collateralized transactions.

3. SEC PROPOSALS

The SEC has several proposals under consideration related to its Net Capital Rule. One approach would involve maintaining the current Net Capital Rule. A second approach would devise capital requirements that would comprehensively address the credit and market risks posed by derivative products so that firms could conduct their derivative activities in registered broker-dealers without what they often regard as undue capital constraints. A third approach, which would be combined with either of the first two approaches or implemented separately, would be to formulate separate capital guidelines that would specifically apply to Derivative Product Companies (separately capitalized subsidiaries) that are registered broker-dealers. Although the current Net Capital Rule contains treatment for derivative transactions, much of the Rule's structure was developed prior to the recent growth and development of the OTC derivative markets. The SEC, therefore, is considering different approaches to the treatment of derivative products in order to evaluate whether the Net Capital Rule should be modified.

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[31] The Basle Committee is hopeful that the proposals would be implemented in 1994; comments on the proposals are due by December 31, 1993.

4. CFTC RECOMMENDATIONS

The CFTC released a report in October, 1993, entitled OTC Derivative Markets and Their Regulation, as required by the Futures Trading Practices Act of 1992 (P.L. 102-546). The CFTC report contains several recommendations, including an interagency council to explore such issues as information access, disclosure, internal controls, and clearing facilities for OTC derivatives for future consideration to improve the futures and options markets.

5. GROUP OF THIRTY STAFF PROPOSAL FOR CAPITAL ADEQUACY REGULATION

In May 1993, Charles Taylor, of the Group of Thirty staff, circulated for comment a proposal for bank capital standards entitled A New Approach to Capital Adequacy Regulation. This proposal suggests a new framework for assessing capital adequacy that would substitute for the current Basle risk-based capital requirements. The Taylor proposal would set forth a capital calculation based upon income volatility, rather than type of asset as does the Basle Accord.

G. RECENT CONGRESSIONAL ACTION REGARDING FINANCIAL DERIVATIVES

Congressional interest in financial derivatives centers around legislation proposed and formalized in the 102nd and 101st sessions of Congress. The following legislative items each contain provisions relating to financial derivatives.

1. THE FUTURES TRADING PRACTICES ACT

The Futures Trading Practices Act (P.L. 102-546) was signed into law on October 28, 1992. The Act contains four provisions relevant to derivatives.

a. Margins on Stock Index Futures: Section 501 of the Conference Report amends Section 2(a)(1)(B) (7 U.S.C. 2a) of the Commodity Exchange Act (CEA) to require that any contract market in a stock index futures contract (or option thereon) file with the FED any rule setting or changing levels of margin for such contract.

b. Exemption Authority for the CFTC: Section 502 of the Conference Report amends Section 4(c) of the Act (7 U.S.C. 6) to authorize the CFTC, in order to promote responsible economic or financial innovation and fair competition, to exempt any agreement, contract or transaction (including persons or class of persons involved in the transactions), or class thereof, from the exchange-trading or any other requirements of the Act. The CFTC must determine that the exemption would be (1) in the public interest, (2) consistent with the purposes of the Act, and (3) entered into solely between appropriate persons. "Appropriate persons" is defined in the Act broadly, but does include the following: banks; broker-dealers; insurance companies; investment companies; futures commissions merchants (FCMs); government entities; corporations with a net worth over $1 million; and other persons the CFTC determines to be appropriate in light of their financial qualifications.

c. Hybrid and Swap Exemptions: Section 502 also authorizes the CFTC in Section 4(c)(5)(A) and (B) of the Act to exempt "hybrid instruments that are predominantly securities or depository instruments" and "classes of swap agreements that are not part of a fungible class of agreements that are standardized as to their material economic terms." Based on this section and report language in the Conference Report, the CFTC, on January 22, 1993 (58 FR 5587) adopted a final rule exempting swaps from all provisions of the Commodity Exchange Act subject to the provisions outlined in the statute.

d. Risk Assessment for Holding Companies: Section 229 of the Conference Report requires FCMs to obtain such information and keep such records on affiliates as required by the CFTC. In the case of a futures commission merchant that is affiliated with a depository institution, if the merchant utilizes for the recordkeeping or reporting requirement copies of reports filed by the affiliate with a federal banking agency, it will be in compliance with this section. If the CFTC determines that supplemental reports are required because of "potential risks" to the futures merchant,

the CFTC is required to first consult with the appropriate federal banking agency, and determine if the information is available from the agency, unless any delay from consultation would be "inconsistent with...stability."

2. FEDERAL DEPOSIT INSURANCE CORPORATION IMPROVEMENT ACT OF 1991

The Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA), Public Law 102-242, was signed into law on December 19, 1991. FDICIA contains several provisions which are relevant to financial derivatives.

a. **FDICIA Netting Provisions:** FDICIA contains a provision regarding the netting of obligations between financial market participants in the event that one of the participants fails. The U.S. Bankruptcy Code and the Financial Institutions Reform Recovery and Enforcement Act (FIRREA) contain related provisions.

b. **Regulatory Provisions:** FDICIA contained several regulatory provisions that have a direct effect on the supervision of derivatives activities. These include Sections 305, 308, 121, and 112 of FDICIA (explained above in **Section E.6.**).

3. FINANCIAL INSTITUTIONS REFORM, RECOVERY AND ENFORCEMENT ACT

The Financial Institutions Reform, Recovery and Enforcement Act (FIRREA), Public Law 101-73, is federal legislation passed in 1989 providing, among other things, government funds to insolvent savings and loan associations, and mandating sweeping changes in the examination and supervision of insured institutions. FIRREA required savings and loans to adopt new capital standards, transferred the regulatory powers of the Federal Home Loan Bank Board to a new agency (the OTS), and placed the 12 district Federal Home Loan Banks under control of an oversight board (Federal Housing Finance Board). The Act also abolished the Federal Savings and Loan Insurance Corporation (FSLIC).

Similar to FDICIA, FIRREA contains provisions regarding the netting of obligations between financial market participants in the event that one of the participants fails. Unlike FDICIA, however, FIRREA does not cover both bilateral and multilateral netting. FIRREA also amended the Federal Deposit Insurance Act to allow parties to liquidate or net obligations under a qualified financial contract[32] when the counterparty is a depository institution for which the Federal Deposit Insurance Corporation (FDIC) has been appointed receiver. Unlike the FDICIA provisions, FIRREA allows netting by any party to a contract with a failed depository institution, not just by financial institutions.

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[32] A Qualified Financial Contract means any securities contract, commodity contract, forward contract, repurchase agreement, swap agreement, or similar agreement as determined by the Federal Deposit Insurance Corporation.

FIRREA also has a provision which prevents "cherry-picking" between swap Master Agreements. The provision states that "any Master Agreement for any agreements described in clause (vi)(I) [swap agreement] together with all supplements to such master agreement shall be treated as 1 swap agreement." In other words, the provision contained in Section 212 of FIRREA prevents discriminatory selection of contracts in different Master Agreements.

4. MARKET REFORM ACT

The Market Reform Act of 1990, Public Law 101-432, required that regulatory agencies collect information from financial entities to evaluate risk management systems. Pursuant to this Act, the SEC adopted risk assessment recordkeeping and reporting rules that provide the SEC with an overview, on a periodic basis, of the financial and securities activities of affiliates, including unregistered affiliates in which much derivative activities take place, that are likely to have a material impact on a broker-dealer's financial and operational condition. In addition, broker-dealers are required to file with the Commission records concerning their policies, procedures, and systems for monitoring and controlling financial and operational risks resulting from the activities of their affiliates.

H. CASE STUDIES INVOLVING DERIVATIVES

There are several interesting case studies which provide engaging insights into the world of financial derivatives.

1. COMPANIES SUED FOR NOT USING DERIVATIVES

a. Grain Co-op Sued by Shareholders for Not Hedging their Grain

In Brane vs. Roth, 590 N.E.2d 587 (Ind. Ct. App. 1992) the Court of Appeals of Indiana affirmed a trial court's findings that the board of directors of a grain cooperative breached its fiduciary duty in failing to adequately supervise the manager of the cooperative and become aware of the essentials of hedging. In this case, the trial court held that the directors were liable for retaining a manager inexperienced in hedging and for failing to attain knowledge of the basic fundamentals of hedging to be able to direct the hedging activities. The cooperative had over $7 million in grain sales and hedged only $20,500 in grain contracts. The lack of hedging was found to be the proximate cause of the cooperative's $424,000 loss.

b. Action Brought Against a Computer Company for Lack of Currency Hedging

The absence of adequate hedging to guard against financial loss has also been used in a derivative class action against the board of directors of Compaq Computer Corporation in a pending action in federal court in the Southern District in Texas filed in 1991. In the complaint, the class alleges that the board made false statements regarding the operations and outlook for Compaq. The board also failed to disclose, among other things, that Compaq lacked sufficient and adequate foreign currency hedging mechanisms to insulate Compaq from appreciation in the value of the U.S. dollar in foreign currency markets. Compaq at the time of the complaint derived 54% of its revenues from foreign sales. This lawsuit has not yet come to trial.

2. CASE STUDIES INVOLVING FAILED OR FAILING COUNTERPARTIES

a. Drexel Burnham Lambert

Drexel Burnham Lambert Group Inc. (DBL Group), and its swap subsidiary, DBL Products, went bankrupt in 1990 at which time they were the counterparty in a number of derivative contracts. According to the industry participants and regulators involved, the contracts were unwound, or settled, "smoothly" with the cooperation of the other counterparties involved. The unwinding process was accomplished without apparent adverse effects on domestic and foreign financial markets, and no taxpayer money was lost. Because DBL Group filed for bankruptcy, most counterparties to DBL Product's swap transactions were not, under the terms of the swap agreements, obligated to pay the money they owed since DBL Products technically defaulted on the swaps. However, virtually all counterparties paid Drexel the money they owed for

various reasons. Many counterparties had unwound their contracts with Drexel upon anticipation of the failure.

The failure of Drexel was a stimulus behind the passage of the Market Reform Act of 1990 which gave the SEC the ability to monitor the activities of broker-dealer unregistered affiliates under rules implementing a risk assessment program. Today, the SEC receives standardized regulatory reports regarding the financial activities of broker-dealer holding companies and their affiliates under the risk assessment program, including information on derivatives activities. In addition, the bankruptcy case of DBL Products was initiated prior to the June 25, 1990 effective date of amendments to the Bankruptcy Code concerning the treatment of swap transactions.[33] The unwinding of DBL Product's swaps portfolio was therefore accomplished in accordance with legal authority existing before the effective date of these amendments.

b. The Bank of New England

On January 6, 1991, federal regulators seized the Bank of New England (BNE) and its subsidiaries. BNE, with $22 billion in assets, was the country's 33rd largest banking company at the time. According to regulators, BNE's troubles were caused primarily by its aggressive real estate lending in a local economy that subsequently declined. At the time it failed, BNE was the counterparty in a number of derivatives contracts. According to industry sources, the contracts were unwound, or settled, "smoothly" with the cooperation of the other counterparties involved. No significant losses, if any, were incurred by any party.

According to the FDIC, all derivative contracts in the BNE case met the legal definition of "qualified financial contracts" and were transferred to the bridge banks that were formed to absorb certain assets, liabilities and off-balance sheet obligations of the failed bank and its subsidiaries. The effect of this transfer was to have the FDIC temporarily step in as counterparty in place of the failed institution. Generally, the process of timely notification and other requirements of the FDI Act was, according to the FDIC, carried out without any problems.

c. Salomon Brothers

In 1991, Salomon Brothers reportedly faced the withdrawal of certain uncommitted credit lines and, for a period of time, experienced funding difficulties resulting from the Treasury auction issue.[34] At that time, Salomon was the

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[33] These amendments provide protection for parties to swap transactions when their counterparty becomes the subject of bankruptcy proceedings under the Code. Specifically, under the amendments, such parties are permitted to cause liquidation of swap transactions with the bankrupt counterparty and to apply rights of offset. They are also protected from preference actions to recover prebankruptcy transfers. 11 USC §§101(55), 362(b)(14).

[34] On August 9, 1991, Salomon Brothers, Inc. announced that it had reported to the appropriate government agencies the discovery of violations of law and other irregularities in certain bids that it had submitted in several auctions of U.S. government securities during the previous year. On May 20, 1992, Salomon settled the Treasury auction investigation by paying a $290 million fine, agreeing to an SEC injunction and administrative order, and being suspended from trading activity with the Federal Reserve Bank for two years. Other investment banks were also fined on similar charges.

counterparty in a number of derivatives contracts.

According to the SEC, despite its Treasury auction violations and the related investigation and penalties, Salomon was able to meet all of its existing obligations to customers and creditors, including those involving derivative products. After disclosure of its Treasury auction violations, however, the number of new interest rate swaps into which Salomon entered declined. This may have been a result of counterparties' reluctance to do business with a firm whose long-term prospects at that time had been called into question. Nevertheless, according to the SEC, it does not seem that Salomon's ability to satisfy its ongoing obligations was adversely affected by its involvement in the Treasury auction issue.

The Treasury auction issue did not result in any CFTC action against Salomon for violations of CFTC regulations governing futures trading. Salomon's compliance with financial requirements, such as segregation of customer funds and maintenance of adequate net capital, was monitored by its designated self-regulatory organization (DSRO). The CFTC in turn was in frequent contact with the DSRO on the situation. The DSRO also did not report that Salomon Brothers was unable to comply with CFTC financial requirements at any time during that period.

I. STUDIES

Several studies have been conducted by various entities on the subject of financial derivatives. What follows is a summary of such studies.

1. GROUP OF THIRTY REPORT -- DERIVATIVES: PRACTICES AND PRINCIPLES

The Group of Thirty sponsored a study on derivatives entitled Derivatives: Practices and Principles. This Report was released on July 21, 1993. The authors of the report included senior managers from firms that are dealers and end-users of derivatives, and individuals from related legal, accounting, and academic disciplines.

The Study consists of a Recommendation section which sets forth 20 recommendations for industry practitioners and 4 recommendations for legislators and regulators. The Study also contains an Overview of Derivative Activities, and two Appendices, which contain the Study's detailed background materials. A third Appendix containing the G30's survey of industry practices has curiously yet to be released.

2. COMMODITY FUTURES TRADING COMMISSION

The Conference Report for the Futures Trading Practices Act directed the CFTC to conduct a study with the cooperation of and in consultation with the SEC and the Federal Reserve on the risks, size, and scope of derivatives, and on the need for regulation. On October 25, 1993, the CFTC released the above-referenced study, entitled OTC Derivative Markets and Their Regulation, as required by the Conference Report to accompany P.L. 102-546, the Futures Trading Practices Act.

The CFTC Report provides an overview of derivative products found in today's marketplace and their attendant risks, as well as a survey of regulatory controls and risk management practices currently in effect in the United States. In its recommendations, the CFTC Report requested the formation of an interagency council and identified areas of concern to be addressed in any future attempts to impose additional legal or regulatory safeguards and to ensure the integrity of the OTC derivatives markets.

3. THE PROMISEL REPORT

In 1991, the Governors of the central banks of the Group of Ten countries established a working group to study recent developments in international interbank relations. The group was asked to focus on the role and interaction of banks in nontraditional markets, notably the markets for derivative instruments, to examine the linkages among various segments of the interbank markets and among the players

active in them, and to consider the concerns to which these aspects might give rise.

The Report concluded that international interbank relations have undergone significant changes in recent years. Most notably, financial operations involving derivative instruments have significantly altered the role of the traditional international interbank deposit markets. Such operations have strengthened linkages among various sectors of the financial industry, as well as between banks and non-financial firms.

4. INSTITUTE OF INTERNATIONAL FINANCE

In 1992, the Bank for International Settlements (BIS) published the Promisel Report,[35] which encouraged the banking industry to communicate its suggestions for the supervision of derivative activities. Member banks of the Institute of International Finance (IIF) welcomed the encouragement of the Promisel Report, and have taken the initiative to describe prudent practices that would help reduce derivatives-related risks without adversely impacting on the market's function and flexibility. The banks hoped that by articulating their views through the forum of the IIF, they might contribute to the international public policy debate while also providing guidance to all banks participating or planning to participate in the derivative markets. The banks also hoped to dispel any misperceptions concerning their derivative activities and the related management controls that currently exist.

Also in 1992, a task force on bank derivative activities, composed of senior bank managers from European, Japanese and U.S. banks was formed at the IIF. In May 1993, the task force released recommendations on four key issues (Internal Controls; Netting; Capital Adequacy; and Disclosure) in conjunction with the Promisel initiative and the responses from IIF-member banks.

5. U.S. GENERAL ACCOUNTING OFFICE

In 1992, requests were made to the General Accounting Office to examine issues surrounding derivative activities. Several members of Congress were involved, in some context or another, with these inquiries. They included Senator Riegle, and Representatives Gonzalez, Markey and Leach. The GAO is currently in the process of preparing their report, which is expected to be released in 1994.

6. BANK OF ENGLAND

In April 1993, the Bank of England published Derivatives: Report of an Internal Working Group. The Report provides the findings and recommendations of an internal working group on derivatives set up by the Bank of England. The group

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[35] Report Prepared by a Working Group established by the Central Banks of the Group of Ten Countries, "Recent Developments in International Interbank Relations," Bank for International Settlements, Basle, October 1992.

was given the specific task of focusing on derivative activities in London and the associated risks being run by U.K. banks, and to identify the supervisory and central bank issues related to this topic.

The two substantive recommendations provided by the Bank of England report are **1.** "That research on the relative price volatility and liquidity of cash and derivative markets should be conducted, with a view to improving our understanding of the increasing links between financial markets, and their potential systemic implications," and **2.** "That the Bank [of England], in consultation with the BIS, considers which data on exchange-traded and OTC derivative markets it is desirable to collect for the purposes of examining market size and the degree of concentration, and subsequently considers establishing a survey of the derivative markets comparable to that already conducted for foreign exchange activity."

7. INTERNATIONAL MONETARY FUND

In August 1993, a staff team from the International Monetary Fund (IMF) published a study entitled The Growing Involvement of Banks in Derivative Finance -- A Challenge for Financial Policy. The study provides an overview of the derivative markets, the risks associated with these markets, and the instruments traded therein.

SECTION II

Highlights of Agency Responses

SECTION II -- HIGHLIGHTS AND SUMMARY OF AGENCY RESPONSES

GENERAL

- The size, complexity, and dramatic growth of the derivatives market demands increased regulatory scrutiny and concern. Appropriate monitoring, examination, and supervision of derivatives activities by insured institutions should receive the highest regulatory priority.

- Significant benefits accrue from the use of derivatives by financial institutions. Derivatives may lead to better risk management techniques by financial institutions.

- When used prudently derivatives can offer managers efficient and effective methods for reducing certain risks through hedging activities. Used properly, derivatives could have helped certain S&Ls improve profitability, reduce risks, and avoid losses that resulted from the sharp increase in short term rates that occurred in the late '70's and early '80's.

- Despite the apparent benefits of wider financial industry use of derivative products, a persuasive argument can be made that only sophisticated users with comprehensive risk management strategies and qualified personnel should be allowed to participate on a large-scale basis. The fact that market-making for derivative products is feasible only for firms in strong financial condition and with a long experience in dealing with similar risks has a positive impact on the market.

- Regulators should seek to ensure that the capital, expertise, reserves, and operating procedures of a bank are commensurate with the level of risk inherent in any portfolio or activity both on- and off-balance sheet. Regulators believe that the credit risk to which banks are generally exposed by virtue of their financial derivatives transactions is substantially less than their credit risk exposure arising out of other off-balance sheet activities, many of which are subject to limits imposed by regulation. The regulators do not, as a matter of policy or practice, seek to mandate the degrees or level of risk assumed by what are determined to be sound, appropriately capitalized, well managed financial institutions. Risk limits, however, may be imposed on troubled institutions warranting heightened regulatory concern on a case-by-case basis.

- The federal banking agencies should be skeptical of active trading in any of the derivative markets by insured institutions, particularly smaller institutions, unless management can convincingly demonstrate both sufficient capitalization and sophisticated technical capabilities.

- The major advantages of derivatives described by regulators include: (i) Use for risk management and asset/liability management purposes; (ii) Broaden access to capital markets and reduce funding costs; (iii) Enhance ability to serve customers; (iv) New revenue source for financial institutions; and (v) Reduce exposure to price risk (exchange-traded).

SUPERVISION OF DERIVATIVE ACTIVITIES

- The banking agencies have taken significant steps to supervise derivative activities. Written policies and examination procedures are in place and examiners are receiving intensive training as to the complexities of derivative instruments.

- The primary regulatory concerns of the banking agencies related to derivatives activities included:

    1.) The volume and complexity of derivatives affects both the ability of examiners to evaluate a bank's activities and the ability of bank management, itself, to identify, understand and control the risk management process. These concerns extend to the evaluation of capital adequacy, the adequacy of internal controls, and any potential effects on interbank clearings and systemic risk. Concerns also arise as to the integrity and reliability of the payments system.

    2.) Regulators may over-react to the expansion of derivatives activities and needlessly discourage activities that would reduce risk or enhance the profitability and stability of the banking industry.

    3.) Banks that engage in derivatives transactions, either as dealers or end-users or both, should appropriately manage the credit, market, liquidity, operational and settlement risks arising out of derivatives transactions and have exposure limits to control these risks.

    4.) Banks should maintain the appropriate level of capital reflecting risks associated with derivatives.

    5.) The Board of Directors and senior management should understand derivatives, approve a strategy for utilizing derivatives, and properly supervise the use of derivatives. Management should not unduly rely on the trading acumen of various brokers, dealers or consultants.

    6.) All banks, as well as small banks, should use derivatives properly to reduce funding costs, diversity funding sources, and reduce and manage risk. In addition, all banks should not be taking imprudent risks or taking positions that unduly expose them to changes in rates and prices.

    7.) Banks newly engaged in derivatives dealing activities should have the adequate level of sophistication in systems and personnel.

    8.) Employees should have the adequate level of expertise.

    9.) Institutions should have the ability to suitably measure both credit and market risk exposures for individual institutions and for groups of institutions.

10.) The rate at which derivatives exposures are accumulated should be monitored and controlled carefully.

11.) Smaller institutions are vulnerable to speculative inducement and pressures.

- The primary regulatory concerns of the SEC related to derivatives activities included:

  1.) Customer Suitability: The customer base of the derivatives market, which began with only the largest, most sophisticated institutions, may reach the next tier of institutional investors. Certain derivatives products, such as detachable call options on municipal bonds or collateralized mortgage obligations, are available to retail investors.

  2.) Market Impact: The increased use of derivatives could lead to the failure of one or more derivatives dealers during periods of extreme market stress, with this failure creating ripple effects throughout the OTC derivatives market for broker-dealers and other market participants.

  3.) Market Interaction: Interrelationships between cash markets and derivatives trading exist, and market volatility can be magnified to the extent a few large dealers dominate and are capable of moving a market.

- The agencies do not advocate major changes to the current regulatory framework. Some specific recommendations by the regulators for administrative action included:

  1.) The OCC requested the formation of an interagency task force to address the involvement of U.S. banks in derivative financial products.

  2.) The FDIC suggested that joint bank regulatory examinations for major derivatives dealers (banks and bank holding companies) could provide substantive benefits to all three agencies.

  3.) The OTS suggested that it may be useful to conduct an interagency review of the capital treatment of derivatives under the risk-based capital standards to determine whether any changes to those standards are needed.

  4.) The OTS stated that it may be beneficial for regulators to encourage dealers and end-users of derivatives to comply voluntarily with the recommendations contained in the Group of Thirty Study.

5.) The SEC stated that it hopes that any changes in the net capital treatment of OTC derivative products that develop from the SEC's review of its capital standards will encourage OTC derivatives activities now conducted in unregistered affiliates of broker-dealers to be brought within registered broker-dealers under SEC jurisdiction.

6.) The SEC suggested that the establishment of one or more clearinghouses that specialize in the processing of trades in swaps may improve the current regulatory framework for the swaps market by helping to ensure the legal certainty of swaps transactions and by improving settlement efficiency through payment netting. A swaps clearinghouse also would provide a focal point for coordination of industry practices and communication with interested regulators. The SEC stated that while there are regulatory issues involved in the establishment of a swaps clearinghouse, regulators should actively evaluate the development of such facilities.

7.) The CFTC recommended in its study on OTC derivatives the establishment of an interagency council to identify common regulatory issues among agencies and foster regulatory coordination regarding derivatives. The CFTC stated that in light of the difficulty of obtaining basic information about OTC derivative transactions, the CFTC suggests that an early focus of the council should be information access. Other agenda items for the council should include issues related to pricing, disclosure, risk valuation, internal controls, and clearing facilities for OTC derivatives. The council is intended to supplement, not replace, efforts by individual agencies in areas of common interest.

8.) The SEC stated that regulation may be the only means of ensuring that risk, including systemic risk, is adequately addressed by participants. According to the SEC, there is no agreement among dealers and end-users on how to manage risk and it is unlikely that dealers and end-users would factor systemic risk into their individual risk calculation. For example, the Group of Thirty Report states that most small end-users do not perform stress simulations essential in determining the risks associated with either a single investment decision or the management of a derivatives portfolio.

CAPITAL STANDARDS

- The current risk based capital standards require that insured institutions hold capital against the credit equivalent amount for an off-balance sheet item. The credit equivalent amount may not exceed a 50% risk weighting. The credit equivalent amount is composed of the present credit exposure plus the potential future credit exposure. The present credit exposure is the mark to market value of the derivative instrument. The potential future credit exposure is the notional amount of the derivative multiplied by a risk factor depending on the type of

contract that is involved.

- Proposed new capital requirements for off-balance sheet instruments and activities are being discussed both on an interagency and international basis but no final decisions have been made. The Basle Committee has issued proposals for public comment related to netting, market risk and foreign exchange risk. The comment period ends December 31, 1993.

- The SEC is considering changes to its net capital rule for broker-dealers to better account for derivative activities. One major consideration is that under the current net capital rule derivatives activities are generally being conducted in unregulated affiliates of broker-dealers, without any capital requirements. The SEC is seeking to modify its net capital rule to bring derivatives activities into the broker-dealer.

- The CFTC has established margin requirements and minimum capital standards for dealers in the exchange traded markets and believes that these measures provide adequate protection.

DISCLOSURE

- The banking agencies are expanding regulatory disclosure requirements for derivative activities.

- The agencies favor retaining current reporting requirements based on notional amount in call reports. Also, the agencies are considering expanding call reports to include enhanced information to assess market risks, concentration of counterparty exposures and the risk reducing effects of legally enforceable netting contracts. Any call report changes are being designed to minimize any additional regulatory burden being placed on insured institutions.

- Expanded reporting would occur under new auditing requirements pursuant to Section 112 of FDICIA. Section 121 of FDICIA would require new market value disclosures by insured institutions including disclosures of off-balance sheet items.

- New interest rate risks standards required pursuant to Sec. 305 of FDICIA would also provide increased disclosure of derivative exposures. The regulators proposal for interest rate risk will likely lead to revision of call reports to permit the agencies to collect the information necessary to monitor the level of interest rate risk and assess the need for additional capital at banks that may have significant exposures to interest rate risk. The proposed interest rate schedule would also require additional reporting of off-balance sheet positions.

ACCOUNTING

- Different examination and regulatory treatment is accorded to institutions which can clearly demonstrate the use of derivatives is part of a risk reduction strategy, and those which are dealing, trading or otherwise taking an unmatched position in

derivatives. Accounting and regulatory reporting treatment is determined by the manner of use. Deferral (hedge) accounting is generally permitted in conduction with a risk reduction strategy, but mark-to-market or lower of cost or market accounting is required for all other uses of derivatives.

- Well capitalized institutions may engage in derivatives activities other than for purposes of a risk reduction strategy. Institutions that are not well-capitalized may be discouraged based on safety and soundness considerations from taking unmatched positions.

- FASB and others responsible for setting accounting standards should, as a high priority, issue definitive guidance on reporting for financial instruments, including derivatives.

MANAGEMENT

- Bank managers must recognize that derivatives activities require new risk management methodologies, stronger risk controls and better management systems. Bank management must continually review their policies, procedures and information systems in order to adequately manage and control these constantly changing risks.

- The banking agencies may determine that engaging in derivatives activities is an "unsafe or unsound" banking practice by an insured institution if management does not exhibit the proper technical knowledge of these instruments.

- Senior management must have expertise sufficient to evaluate the effectiveness of risk control arrangements. The inherent complexity of many derivative instruments is such that derivatives may be only fully understood by a limited number of people in any single institution. Therefore, financial institutions must be careful to design control systems that ensure sufficient checks and balances are in place and that the risks presented by the concentration of technical knowledge and expertise are adequately managed.

- Management and the Board of Directors are responsible for ensuring that internal control systems provide reasonable assurance that errors and omissions are prevented or revealed before major problems develop.

- The strict segregation and independence of the management, policy and internal control functions of a firm from the trading and risk taking functions is critical.

GROUP OF THIRTY REPORT

- The regulators commented that the 20 Recommendations by the Group of Thirty (G-30) for industry practices should not be mandated by regulation. The G-30 recommendations represent good business principles, but in many cases are too subjective for effective implementation. In addition, not all of the G-30 recommendations could be appropriate for all market participants. The lack of

specificity in the G-30 Study may actually hinder effective supervision by encouraging adoption by the industry of minimal standards.

- Regulators believed that two of the G-30 recommendations may contradict current regulatory practice. These are: (1) The G-30 recommendation concerning quantification of market risk using probability analysis would contravene current regulatory policy if it is intended to replace current regulatory capital standards related to "add-ons"; and (2) the G-30 recommendation encouraging unlimited two way payments as part of a broader use of bilateral netting.

- The regulators generally appear to agree with the G-30 recommendation for greater harmonization of accounting standards.

CREDIT RISK

- In assessing credit risk, an institution should conduct an independent credit analysis. This independent analysis should include an assessment of the overall financial condition of the counterparty including performance and resources of the counterparty (including capital) and the institution's future earnings prospects given its past performance and the industry and markets in which it operates.

- Credit risk for derivatives should not be assessed solely on the basis of credit ratings. Credit ratings may be appropriate for purposes of the net capital rule applied to broker-dealers.

COLLATERAL

- For OTC derivatives, the use of collateral is an effective means to limit credit exposure and to manage counterparty credit risk more effectively. Prudent use of collateral may add market stability by limiting credit exposure. Use of collateral does not exempt an institution from normal credit analysis.

- Some market participants have negotiated contracts that require the posting of collateral if certain "triggering events" occur. In some cases, the triggering event is based on the size of exposure using market values; in other cases it may be based on the creditworthiness of the counterparty. Excessive reliance on such collateral triggers, particularly those based on creditworthiness may be imprudent. In particular, such collateral arrangements could place substantial liquidity pressures on a counterparty just when its creditworthiness is weakening and its access to liquidity is more limited.

- Problems associated with collateral include tying up high quality, liquid assets, potentially leading to liquidity problems. Determining and using the appropriate level of collateral is critical -- too high will keep people out, too little defeats purpose.

- For exchange traded derivatives, adequate margin requirements reduces speculation, reduces the capital exposure of broker dealers, and protects against

systemic risk in times of market stress.

MARKET RISK

- The regulators do not believe that risk limits or market limits should be established by regulators. Risk limits may be utilized on a case-by-case basis for troubled institutions.

- Each of the banking agencies recognizes the importance of stress testing on a derivatives portfolio. The simulations must be tailored to the needs and capabilities of individual institutions. Stress testing should account for market, credit and liquidity risk. The agencies proposals for risk-based capital based on interest rate risk require simulations for capital purposes.

- Because OTC derivatives are customized non-standard products without a clearing organization and for which reference prices may not exist, it may be difficult to design effective simulations.

LIQUIDITY RISK

- Securities firms and banks are generally on an equal footing with respect to the liquidity necessary to conduct derivatives activities.

- Every financial intermediary, whether organized as a bank, a securities firm, or otherwise, needs to carefully assess and plan to meet unusual liquidity pressures, including those that might accompany a deterioration of its creditworthiness. In this context, the firm should realistically assess its ability to readily close out positions in OTC derivatives. Those assessments should then be incorporated in planning for the management of liquidity needs.

SYSTEMIC RISK

- The greater awareness and understanding of risk and the enhanced methods of managing risks probably have reduced the likelihood of systemic problems and will continue to do so over time as industry and supervisory practices advance.

- The complexity of derivatives activities in conjunction with the urging of regulators has induced financial institutions to upgrade significantly their risk management capabilities.

- Based on the experience of the 1987 Market Break, both portfolio insurance and OTC equity derivatives pose unspecified, but potentially large, selling pressure that can have a significant adverse effect on the markets, particularly during a period of extraordinary volatility. The market-wide effects of so-called "dynamic hedging" selling during market declines suggest that regulators should take prudent measures to study the potential for similar selling by providers of OTC equity derivatives during any future market decline.

NETTING

- Properly structured, legally enforceable, netting arrangements have substantial benefits not only for the parties to such arrangements, but to the financial system as a whole. Such benefits include a reduction in counterparty credit risk, an ability to increase profitable businesses within existing credit limits, and the reduction of settlement risk within the financial system. Bi-lateral netting may have the effect of reducing capital requirements for derivatives. Regulators are currently studying these proposals.

SUITABILITY

- Adequate suitability rules and customer protections exist for exchange-traded derivative instruments.

- For OTC derivatives, the most effective customer protection is adequate disclosure and enhanced education of end-users. Dealers marketing a derivative product to an end-user should exercise caution in assessing the appropriateness of that product for the risk management purposes of the end-user.

- The FDIC advocates that dealers should be required to give certain enhanced disclosures on the risks of derivative instruments to end-users. This would protect the end-user as well as assist examiners in monitoring the risks taken by insured bank end-users.

SEPARATELY CAPITALIZED SUBSIDIARIES

- The banking agencies generally do not believe that derivatives activities should be conducted in a separately capitalized subsidiary. Well-capitalized institutions would gain no benefit from a subsidiary and weaker institutions should not be able to dedicate significant amounts of capital outside of insured institutions.

INSOLVENCY

- The agencies generally believe that significant benefits may accrue from conforming the standards of the Bankruptcy Code, FDICIA and FIRREA related to the treatment of derivative instruments.

CLEARINGHOUSE

- The agencies do not generally believe that the formation of a clearinghouse for OTC derivatives may be appropriate at this time. Clearinghouse offset is practical only with the use of standardized contracts and consistent legal statutes for all participants. Formation of a clearinghouse for OTC derivatives may

increase systemic risk, while losing certain benefits currently associated with customized derivative products. While there may be advantages in creating a clearinghouse system for OTC derivatives, many details would need to be worked out before an effective clearinghouse offset mechanism could be developed.

COMPENSATION

- Performance based compensation policies may provide incentives for improper risk taking. Compensation policies should take into account risks and returns. Just as traders are highly compensated for their skills, employees that audit, control and manage trading activities should be adequately compensated to discourage turnover. Individuals charged with internal control over traders must be given adequate authority and independence.

SPECULATORS

- Large and sophisticated speculators can and do significantly influence the derivatives and other financial markets, as they are usually seeking to profit from real or perceived market pricing inefficiencies and their actions often help bring the various markets into equilibrium. Rules are in place to prevent large-scale market manipulations by speculators.

- The existence of individuals, groups or companies who take large, unmatched positions, i.e., speculators, is a fundamental part of all capital markets activities providing liquidity, balance and reliable pricing to the marketplace.

- Regulators must take steps to prevent abuses by speculators and ensure that speculation does not threaten the safety and soundness of federally insured institutions.

DEPOSITOR PREFERENCE

- Depositor preference will increase by an undetermined and most probably varying amount, the costs of participating in the derivatives markets, both for dealer banks and end-users.

SECTION III

Question-by-Question Summary of Agency Responses

SECTION III -- QUESTION-BY-QUESTION SUMMARY OF AGENCY RESPONSES

Question #1

To supplement the discussion on "Supervision and Regulation of Derivatives" contained in Section III of the January 27, 1993 report issued jointly by the Federal Reserve, the FDIC, and the OCC entitled Derivative Product Activities of Commercial Banks ("Joint Report"), please address the following:[1]

1 a) In general, please summarize and provide the written policies and procedures currently used by your agency to regulate and monitor derivative activities of the institutions under your supervision. Also, please provide a summary of your regulatory authority over derivative transactions.[2]

Each agency cited its statutory authority over derivative transactions of the institutions they regulate, and outlined its supervisory policies, capital requirements, reporting requirements, and examiner training. The agencies listed relevant manuals and supervisory documents, and provided extensive Appendices containing documents and excerpts from relevant documents.

Derivative activities are governed by multiple types and levels of regulation, depending upon the products used, the manner in which it is used, and the type of entity involved.

Jurisdiction

The FED, OCC, FDIC, and the OTS exert their traditional jurisdiction over the derivative activities of the institutions they regulate. The FED regulates bank holding companies and state member banks; the OCC regulates national banks; the FDIC regulates state non-member banks; and the OTS regulates thrifts.

The SEC has authority over the securities activities of broker-dealers, and has adopted certain risk assessment recordkeeping and reporting rules for the affiliates of broker-dealers, including non-registered affiliates in which certain derivative activities

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[1] This question was reworded to accommodate the unique nature of each agency

[2] The written policies and procedures requested should include those documents used in the examination process to assess, among other things, an institution's infrastructure for measuring and controlling risk, to assess an institution's front- and back-office processing regarding the pricing and valuation of derivative portfolios, and to require troubled institutions to minimize their existing risk and limit the size of new off-balance sheet activity. The documents should also include those which describe capital requirements as they relate to derivative activities. In addition, the documents should include those which define reporting requirements regarding derivative activities in Call Reports and Y-9C reports. The Joint Report mentioned that examiners have received considerable training and guidance aimed at off-balance sheet activities and have attended special courses and seminars addressing this issue. Materials provided as part of such training would also be helpful.

are conducted. In addition, the SEC has jurisdiction over certain derivative products which, in general, are defined as securities. The SEC also regulates securities exchanges on which certain derivative instruments trade. (Other derivative products and exchanges on which derivative trade are regulated by the CFTC.)

Under the Commodity Exchange Act, the CFTC has jurisdiction over the futures and commodity options markets. The CFTC also regulates certain exchanges on which derivatives trade. The CEA specifically excludes certain products from CFTC jurisdiction, namely forward contracts, certain interbank market transactions, and certain foreign currency transactions. By the authority granted to the CFTC under the Futures Trading Practices Act of 1992,[3] the CFTC has exempted certain derivative products from most of the provisions of the CEA and the CFTC's regulations, namely swaps, certain hybrids, trade options, and certain energy contracts.

Since 1983, Section 2(a)(1)(B) of the CEA and related securities laws have divided jurisdiction over derivative products between the SEC and the CFTC.[4] Pursuant to this Section, the SEC has jurisdiction over securities, including options on securities (including exempted securities), options on certificates of deposit, options on stock indexes, and options on foreign currency traded on a national securities exchange; the CFTC has jurisdiction over all futures contracts, including futures contracts on stock indices,[5] options on futures contracts and physical commodities and foreign currencies. There is no trading in futures on individual securities. Certain OTC derivatives (derivatives not traded on exchanges or exempted by the CFTC from its jurisdiction) are subject to certain anti-fraud and anti-manipulation regulations of the CFTC and SEC, regardless of the participant. Broker-dealers that conduct any derivative activity involving securities are also required to be members of one or more self-regulatory organizations (SROs).

Reporting and Disclosure

The primary regulatory financial statements for federally-insured commercial banks and savings banks are the quarterly Reports of Condition and Income, commonly referred to as Call Reports. Bank holding companies provide similar data to the FED in the quarterly Y-9C report. FFIEC 035 report collects information on foreign exchange positions. The 035 report is filed at the end of each month by approximately 125 banks, bank holding companies and foreign bank branches in the

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[3] P.L. 102-546, 106 Stat. 3580

[4] The Johnson-Shad Accord regarding this jurisdiction was passed into law by the Congress as part of both the Securities Acts Amendments of 1982 and the Futures Trading Act of 1982. See P.L. No. 97-303, 96 Stat. 1409 (1982) and 97-444, 96 Stat 2294 (1982)

[5] In passing the Johnson-Shad Accord into law, Congress added a provision that provided the SEC with a special consultative and concurrent role in the approval process concerning stock index futures contracts. In particular, the SEC must find that the specific stock index futures contract is cash-settled, not readily susceptible to manipulation, and reflects a substantial segment of the underlying cash market. Futures contracts on individual securities, other than exempted securities, were prohibited.

U.S. with $1 billion or more in foreign exchange commitments. Both reports disclose the notional values of certain derivative instruments and contain information on the replacement costs associated with derivatives. Beginning in 1994, reports filed pursuant to the mandate of Section 112 of FDICIA will provide additional insight into the derivative activities of banks and bank holding companies. With the new Consolidated Maturity and Rate information (CMR) schedule, the OTS collects detailed information on derivative activities of thrifts. The SEC requires registration and collects information from registered broker-dealers as well as their affiliates. The CFTC imposes registration and reporting and recordkeeping requirements on exchanges and on commodity professionals.

Supervision and Examination

The FED, OCC, FDIC and OTS regulate derivative activities through on-site and off-site examinations, capital requirements collecting financial data, obtaining market intelligence and participating in studies. The FED uses a system of supervision and regulation letters. The OCC has issued various circulars which provide guidance for examining derivative activities, including the most recent Banking Circular 277 issued on October 27, 1993 dealing exclusively with derivatives. The OTS has issued Thrift Bulletin 13 and Thrift Bulletin 52 which govern certain aspects of derivative activities.

The SEC summarized its rules regarding fraud and manipulation, broker-dealer regulation, capital requirements, margin requirements, regulation of fair and orderly markets, and special customer protection rules. Broker-dealers effecting transactions in securities that pose special risks to investors, whether such securities are traded on an exchange or in the OTC market, are subject to sales practice requirements intended to protect investors.

The CFTC summarized its rules against fraud and manipulation and noncompetitive trading practices. The CFTC imposes registration and reporting by exchanges and every person that handles the funds orders of customers or advises customers, margin requirements, capital requirements, protection of customer fund requirements, and annual certified audits. The CFTC regulates the exchanges, its clearing facilities, the design of products traded, and the persons soliciting or handling transactions for customers, such as FCMs. The CFTC also discussed their ability to conduct investigations, bring civil or administrative enforcement actions, disapprove and alter exchange rules, set forth private rights of action, and establish criminal sanctions. The CFTC and the SROs impose exchange limits on the size of speculative positions in contracts where large speculative positions would raise concerns. Surveillance systems of the CFTC and the exchanges monitor market activity.

1 b) **The Joint Report mentions that reporting requirements disclose the notional values of certain derivatives only, and therefore do not address the institution's actual exposures which may average approximately 2%-8% of the notional amount. What suggestions do you have for changing the reporting requirements to reflect actual exposures from derivative activities, including, but not limited to, credit exposure and market exposure? Do you feel any changes are needed? (FED, OCC, FDIC and OTS)**

The OCC and the FDIC specifically addressed the need to utilize notional amounts by stating that information on notional amounts is useful and should not be eliminated. The OCC stated that while not intended to measure credit or market risks, disclosure requirements calling for notional and par value data provide useful information regarding volume, nature, and trends of bank derivative activities. Notional values can be indicators of a bank's entrance into new markets and the expansion of lines of business. The FDIC also stated that notional amounts indicate volume and industry trends, and afford a simpler basis for off- and on-site examinations. The FDIC further stated that notional amounts do not fluctuate with time as do credit and market exposure amounts, and therefore are useful to estimate potential future exposure. The current reporting basis makes it more difficult, according to the FDIC, for institutions to under-report their actual exposure by manipulating the complex value-calculation models. So long as all participants in, and regulators of, these markets understand that the notional principal values to not reflect actual credit or market exposure amounts, the current reporting approach, according to the FDIC, need not be radically altered.

The OCC added that it does not believe that the current reporting requirements provide adequate "public" disclosure of financial derivative exposures, and is exploring the need for expanded disclosures or different disclosures. The OCC feels that as a regulator, it has access to quality information.

The FED, the OCC and the FDIC issued a joint notice of proposed rulemaking on interest rate risk (IRR) exposures. The IRR exposures would be disclosed and evaluated under proposed revisions to risk-based capital standards in response to Section 305 of FDICIA. The comments were due October 29, 1993. The implementation framework of the new audited annual reports required by Section 112 of FDICIA will also enhance available data on derivative activities. As part of these audited financial statements, banks and bank holding companies will be required to disclose additional information on their off-balance sheet financial instruments that have a risk of accounting loss. The information to be disclosed incudes:

- The face, contract, or notional principal amount;
- The nature and terms of the instruments along with a discussion of their credit and market risk, cash requirements, and related accounting policies;

- The accounting loss the entity would incur if any party to the financial instrument defaults and the collateral or other security, if any, for the amount due proved to be of no value to the entity; and

- The entity's policy for requiring collateral or other security on financial instruments it accepts and a description of collateral on instruments presently held.

In addition, banking organizations will disclose information about significant concentrations of credit risk from individual counterparties or groups of counterparties for all financial instruments, including derivatives. Banking organizations will also be required to disclose the fair value of financial instruments, including derivatives, for which it is practicable to estimate fair value. When estimating fair value is not practicable, then the banks must disclose descriptive information pertinent to estimating the value of these instruments. Section 112 gives the banking agencies additional authority to require supplemental disclosures in the annual reports.

The Basle Committee, which includes supervisory authorities from 12 major industrial countries, issued for comment in April 1993 revised capital requirements to include market risk in banks' trading portfolios and foreign exchange activities, and legally enforceable netting contracts to account for credit risk. The Basle also issued for comment increased disclosure requirements for interest rate risk. The comment period closes December 31, 1993.

The FED noted that because much of the derivative activity is conducted among a relatively small number of institutions, care is being taken to ensure that any reporting changes are appropriately targeted and do not cause undue reporting burdens on the vast majority of banking institutions that make little or no use of derivative instruments. For example, the proposal for Section 305 exempts institutions with little derivative activity from the reporting requirements.

The FED stated that incremental information that would differentiate derivatives used for hedging purposes from other derivatives and that would identify the related impact of each category on bank earnings and balance sheets as well as any deferred hedging losses or gains could also be useful. The FED is currently considering initiatives along these lines.

The OTS stated that in contrast to the banking agencies, the OTS collects information on all major types of off-balance-sheet instruments. Information is collected for each type of instrument, including a code to identify the type of contract, its notional amount, the time to maturity or expiration, and relevant interest rates and margins. Using this information, OTS estimates the current value of 277 different types of instruments and their contribution to risk or risk reduction in each of 9 separate interest rate scenarios on a quarterly basis. The OTS believes that its current reporting requirements provide sufficient information about the derivative activities of savings associations and therefore it has no plans to change reporting requirements for derivatives.

1 c) **The Joint Report states that "... some reporting changes are under consideration. In particular, agency staff is reviewing the extent to which bilateral netting arrangements should be reflected in the reporting of replacement cost exposures. In addition, current efforts on interest rate risk in response to Section 305 of FDICIA will require increased disclosure of derivative exposures, and Section 308 requires banks to establish standards to evaluate their exposures to weak institutions, including those arising from derivative products."**

Please provide a detailed update on these and other reporting changes currently under consideration by your agency. (FED, OCC, FDIC and OTS)

The growing complexity of the derivative markets have caused regulators to re-examine their informational needs. In particular, breaking down sources of income for banks and securities firms and matching income sources with different activities and financial instruments is a high priority for regulators. There are initiatives currently in place to require determination of and reporting of revenue for financial entities according to the precise source of such revenue. A number of enhancements and initiatives are being considered, as follows.

Basle Committee

In April 1993, the Basle Committee on Banking Supervision issued for public comment a consultative proposal on netting with a consultation period extending to December 31, 1993. The netting proposal would expand, under defined conditions, the terms of the 1988 Basle Capital Accord by allowing the use of bilateral netting in the determination of the capital requirements for foreign exchange and interest rate contracts. If adopted in the U.S., the proposal would allow domestic banking institutions to benefit from U.S. law, which appears to provide sufficient certainty regarding the enforceability of netting arrangements, and to report exposures on a net basis, thereby lowering, when appropriate, their capital requirements. To accommodate this proposed change, the U.S. banking agencies expect to issue a formal Notice of Proposed Rulemaking on bilateral netting. Specific reporting changes recognizing netting will be considered once the comment period has ended and the rule is finalized.

Section 305 of FDICIA

On September 14, 1993, the federal banking agencies issued for public comment a Notice of Proposed Rulemaking on interest rate risk in response to Section 305 of FDICIA.[6] The agencies are proposing that an interest rate risk schedule be incorporated into the current Call Reports. The proposal envisions that

[6] See 58 Federal Register 48206. The comment period ended on October 29, 1993.

there would be revisions to the Call Report to permit the Agencies to collect the information necessary to monitor the level of interest rate risk and assess the need for additional capital at banks that may have significant exposures to interest rate risk.

The proposed interest rate risk schedule would require additional reporting of off-balance sheet positions which would be distributed among seven ranges or time banks and segregated into three categories. The three categories would be: those positions representing firm commitments (e.g., swaps, futures and forward-rate agreements); those positions exhibiting options characteristics (e.g., options, caps, floors and swaptions); and those commitments or derivative instruments whose value depends on the value of an underlying asset or index with amortizing characteristics. Specifically, off-balance sheet instruments would be reported in a manner which reflects their impact on the institution's overall interest rate risk portfolio.

As proposed, institutions with a notional value of off-balance sheet interest rate contracts amounting to more than 10% of total assets would be required to report additional data on their derivative positions to enable supervisory assessment of the interest rate exposure of the positions and their contribution to the overall risk profile of the institution. The proposal also offers institutions an alternative approach to evaluating their interest rate risk that would allow such institutions to report the change in value of their assets, liabilities and off-balance sheet contracts under a specified interest rate scenario using the institution's own internal models. Such estimates, including the underlying assumptions used, would be subject to examiner review for acceptability prior to their use for capital adequacy purposes.

Section 308 of FDICIA

Regulation F, 12 CFR 206, implements Section 308 of FDICIA, which required the FED to prescribe standards to limit the exposure of insured depository institutions to other depository institutions. The regulation consists of two primary parts: Prudential Standards which became effective on June 19, 1993, and Credit Exposure which will be phased in beginning June 19, 1993. As implemented, Regulation F requires banks, savings associations, and branches of foreign banks with deposits insured by the FDIC to develop and implement internal prudential policies and procedures for evaluating and controlling credit exposure to depository institutions with which they do business.

The Prudential Standards requires banks to develop and adopt internal policies and procedures to evaluate and control exposure to the correspondents banks with which they do business. The procedures must provide for the consideration of liquidity, credit, and operational risks.

The Credit Exposure section requires a bank to implement internal policies and procedures that limit correspondent's credit exposures. This exposure is limited to 25% or less of the exposed bank's capital, unless the bank can demonstrate that the institution is at least "adequately capitalized." June 19, 1994 is the date by which banks must begin to limit credit exposure to correspondents which are not at least

adequately capitalized. Initially, the limit will be set at 50% of the exposed bank's capital. On June 19, 1995, this limit declines to 25%.

FFIEC Proposal on Implementing Section 121 of FDICIA

Section 121 of FDICIA requires that the federal banking and thrift agencies develop supplemental standards for disclosure of the fair market values of assets and liabilities of insured depository institutions. In April 1993, the agencies issued a proposal that would require institutions with total assets of $500 million or more to disclose the fair values (i.e., estimated market values) of their assets, liabilities, and off-balance sheet financial instruments in their audited annual reports. The FFIEC also released a proposal requesting comment on the feasibility of providing fair-value disclosures in bank Call Reports, perhaps using a condensed format. The agencies are currently reviewing the comments that the FFIEC received on this proposal.

Financial Accounting Standards Board Interpretation No. 39

The federal banking agencies are considering adopting FASB Interpretation No. 39, Offsetting of Amounts Related to Certain Contracts, solely for balance sheet items arising from off-balance sheet derivative instruments. Adoption of FASB No. 39, which takes effect for financial statements issued for periods beginning after December 15, 1993, would improve the reporting of certain credit exposures arising from derivatives in bank Call Reports by clarifying the potential for inappropriate accounting netting practices. In addition, FASB No. 39 would permit entities to offset fair value amounts recognized for derivative contracts executed with the same counterparty under a master netting arrangement. If approved, the reporting guidance consistent with FASB No. 39 would become effective beginning with 1994 Call Reports. The current Call Report instructions generally prohibit banks from offsetting or otherwise netting any assets and liabilities when preparing the report.

OTS

Early in 1993, the OTS completed extensive revision of Schedule CMR (Consolidated Maturity and Rate information) of the quarterly Thrift Financial Report. Schedule CMR was revised to collect more detailed information on derivatives. There are no plans by the OTS to change reporting requirements at this time.

OCC

The OCC is considering the regulatory accounting treatment of various financial derivative instruments. The OCC is concerned that definitive accounting standards for many derivatives have not been issued by FASB. Due to the lack of accounting standards in this area, derivatives (especially swaps) are not consistently accounted for from one institution to the next.

1d) **Please discuss issues regarding payment, clearing, and settlement being considered by the Payment and Settlement Committee organized by the Federal Reserve Bank of New York, and issues being considered the Committee formed by the Board of the Governors of the Federal Reserve and the New York Federal Reserve Bank mentioned in the Joint Report. (FED)**

The FED stated that the integrity and reliability of the payment system is a key concern for the FED, and the derivative-related payments activity is one of a number of factors influencing the day-to-day functioning of the payment system. In some instances, derivatives can directly involve sizable payment-related activity, such as deliveries of currencies under forward foreign exchange contracts. In other instances, the direct payment-related activity arising from derivative contracts may be more modest, such as settlements for contracts calling for a single payment based on the difference between two interest rates. Indirectly, derivatives may be associated with sizable payment activity such as through the clearing and settlement of securities that hedge, or are hedged by, positions in derivatives.

To organize its review of payment system policy issues, the FED set up an internal committee known as the Payment System Policy Advisory Committee (PSPAC) in 1986. Until recently, the Federal Reserve Bank of New York had focused on payments system issues through tits Payments System Policy Committee. In September 1993, the Federal Reserve Bank of New York established a new internal committee structure and payments issues will be examined by the Bank Supervision Committee and the Banking Services Committee.

These committees have not focussed narrowly on derivatives, although topics dealing with or closely related to derivatives would include, for example, the implementation of the netting provisions in FDICIA, private sector efforts to develop clearing houses, and other efforts to deal with cross-border and multi-currency payment risk. The Federal Reserve also has been involved with a third group, the Payment and Settlement Committee (PSC), which was comprised of individuals from the private sector. In the future, the Federal Reserve Bank of New York may consult with the PSC members from time to time on payment issues.

In addition to these committees, the FED formed in 1992 the Committee on Derivative Instruments (CDI), which consists of three Governors. The scope of CDI includes the use of derivative instruments in both the financial and nonfinancial business sectors of the national and international economies. The CDI serves as a focal point for staff efforts related to derivative instruments in the areas of banking supervision and regulation, market regulation, macro-prudential policy, monetary policy, and, in conjunction with the Board's Payments System Policy Advisory Committee, payment system policy.

Question #2

Please discuss in detail capital requirements, both current and proposed, as they relate to derivative activities of institutions regulated by your agency. Do you feel the current capital standards are adequate?

Sufficiency of Capital Standards and Margin Requirements

The OCC stated that it has some concerns that capital standards for derivatives may not adequately reflect risk. While the standards reflect credit risk, the OCC stated that the capital standards do not explicitly consider market risk, and that as new products or activities emerge in the derivative markets, the risk-based capital standards may need revision. Given the truly global nature of derivative markets, the OCC strongly believes that equivalent capital regulations among banking agencies and countries is desirable to prevent competitive inequalities and to ensure prudential banking standards in all major markets. The OCC believes that the initiatives being considered by the banking agencies, including those proposed by the Basle Committee, if implemented, will enhance regulatory capital standards for, and supervision of, financial derivative activities. The FDIC stated that current capital standards need some refining and improvement. The OTS stated that although further improvements to the risk-based capital regulations can be made, its new revised risk-based capital rule which takes into account interest rate risk achieves the objective of relating the capital requirements of institutions more closely to their risk exposures.

Although the SEC's current net capital rule contains treatment for derivative products transactions, much of the rule's current structure was developed prior to the recent growth and development of the OTC derivative markets. The SEC has been informed by certain broker-dealers that the capital requirements necessary to conduct OTC derivative activities in registered versus unregistered broker-dealers is one factor that has encouraged certain derivative activities to be conducted in unregistered affiliates. The SEC, therefore, is considering different approaches to the treatment of derivative products under the net capital rule in order to evaluate whether the net capital rule should be modified in light of developments in the derivative markets, generally, and the OTC market in particular.

The CFTC was asked to comment of the sufficiency of capital requirements set by other regulatory agencies.[7] The CFTC stated that currently, the capital charge for unsecured credit risk is 100% and this renders most OTC derivative activities within the regulated entity prohibitively costly. The CFTC utilizes relative aspects of the SEC capital requirements. Like the SEC, the CFTC is exploring whether changes should be made in its minimum capital requirements or separate requirements should be adopted to accommodate certain types of OTC activity without harm to the

[7] The Question was: In addition, please comment on the sufficiency of capital requirements, both current and proposed, set by other regulatory agencies as they relate to derivative activities of institutions. Do you feel the current capital standards are adequate?

prudential protections in place.

The CFTC was also asked to comment on the sufficiency of margin requirements related to exchange-traded derivatives.[8] The CFTC stated that with respect to the sufficiency of such requirements, the statutory authority delegated to the CFTC by the FED provides that the CFTC may request or direct margin levels "appropriate to preserve the financial integrity of the contract market to its clearing house or to prevent systemic risk." In delegating this review authority to the CFTC, the FED observed that stock index futures and margin levels should be reviewed in the context of other safeguards, such as frequent marking-to-market of positions, standby liquidity arrangements, participant audits, market surveillance, and active risk management. The CFTC's margin review standard adheres to the principles espoused in a report issued by the Presidential Working Group on Financial Markets in 1988. The Working Group is comprised of the chairmen of the FED, SEC, CFTC, and the Secretary of the Treasury.

Capital Standards for Banks and Thrifts

Current Capital Standards

Current capital requirements for derivative activities of banks and thrifts are governed by the standards of the Basle Accord that were agreed to in 1988. These risk-based capital standards have been adopted by the regulatory agencies and applied to: bank holding companies and state member banks regulated by the FED; national banks regulated by the OCC; state non-member banks regulated by the FDIC; and thrifts regulated by the OTS.

The existing capital adequacy standards address the credit risk associated with an institution's on- and off-balance sheet activities, including those relating to derivative instruments. The risk-based capital (RBC) guidelines include an explicit capital charge for the credit risk exposure of OTC derivative products, which are off-balance activities. Foreign exchange rate and commodity contracts with an original maturity of 14 calendar days or less and interest rate, foreign exchange rate, commodity contracts traded on exchanges that require daily payment of variation margin are not covered by the risk-based capital guidelines.

For capital purposes, off-balance sheet derivatives are divided into two broad categories: interest rate contracts and exchange rate contracts. The instruments included under each category include:

Interest rate contracts

- single currency interest rate swaps

[8] The Question was: Please discuss in detail margin requirements, both current and proposed, as they relate to derivative activities regulated by your agency. Also, please comment on the sufficiency of such requirements.

- basis swaps
- forward rate agreements
- purchased interest rate options (including caps, floors, and collars)
- and other instruments that give rise to similar credit risk.

Exchange rate contracts

- cross-currency interest rate swaps
- forward foreign exchange contracts
- purchased currency options
- and other instruments that give rise to similar credit risk.
- equity-based and commodity-linked swaps are also treated as exchange rate contracts.

The capital charge for these derivative instruments is determined by a two-step process:

(1) the calculation of the "credit risk equivalent" (CRE) amount of the contract:

CRE = Present Credit Exposure + Potential Future Credit Exposure, where:

Present Credit Exposure (Replacement Cost) is the mark-to market amount it would cost the institution to replace the contract if a counterparty defaulted, with negative values equal to zero. The mark-to-market exposure is the present value of the net cash flows owed to the institution by the counterparty; and

Potential Future Credit Exposure is calculated by multiplying the notional amount of the contract by a Credit Conversion Factor. The potential risk add-on is an additional buffer to account for a possible increase in the current exposure. It provides an additional cushion in case, over the remaining life of the contract, interest rates, or exchange rates, or the relevant price index moves further in a direction that increases the current value of the contract, and hence the institutions's counterparty credit exposure.

The Credit Conversion Factor is determined by the following chart:

Remaining Maturity	Interest Rate Contracts	Foreign Exch. Rate Contracts
1 year or less	0.0%	1.0%
More than 1 year	0.5%	5.0%

(2) the assignment of the CRE amount to the proper risk-weighting category.

up to 50%, based on the identity of the counterparty to the contract or the nature of the collateral. For example, transactions with banks would be assigned a 20% weight, while those with nonfinancial corporate businesses would be weighted at 50%. The risk-weighted amount is then subject to the 8% risk-based capital requirement. Institutions must maintain a minimum capital ratio of 8% against on-balance sheet assets and the credit equivalent amount of off-balance sheet items, including derivative instruments.

Currently, the capital requirements take into account only credit risk associated with derivatives, not interest rate risk or other market risks.

The OTS recently revised its risk-based capital rule to take account of interest rate risk, including the interest rate risk and risk reduction associated with financial derivatives. The new rule is effective on January 1, 1994. Under the revised rule, institutions with "above normal" levels of interest rate risk will be subject to an interest rate risk capital component. OTS developed a model to estimate the interest rate risk exposure of savings associations. The results of that model will be used by OTS to determine how much capital, if any, an association will be required to hold for interest rate risk, including interest rate risk associated with derivatives.

Proposed Capital Standards

(1) OCC, FDIC, and FED Proposal for Interest Rate Risk: Information related to interest rate risk (IRR) exposures of derivatives will be disclosed and evaluated under proposed revisions to risk-based capital standards in response to Section 305 of FDICIA. The revisions propose new disclosure requirements as well as capital standards.

The OCC, FDIC, and the FED ("the banking agencies") are working together on these proposed revisions. The banking agencies' joint notice of proposed rulemaking on IRR was published in the Federal Register (58 FR 48206) for comment on September 14, 1993. The comment period ends on October 29, 1993. After the comment period, the banking agencies will issue the final rule. The banking agencies have proposed implementing the reporting requirements for IRR contained in the rule effective with the March 31, 1994 Call Reports, and making the revised capital requirements for IRR contained in the rule effective on December 31, 1994.

Section 305 of FDICIA requires each banking agency to revise its risk-based capital standards to ensure that those standards take adequate account of IRR. The proposed rulemaking would establish procedures for measuring banks' IRR exposures and determining the amount of capital that may be needed. Interest rate risk would be measured as the change in the net economic value of a bank for a specified change in interest rates.

A bank's exposure to IRR would be measured either by the bank's internal risk

measurement system, if approved as adequate by the regulators in the examination process, or by a basic supervisory model. The methodology used in the supervisory model is similar to the methodology proposed by the Basle Committee to measure the general market risk in trading portfolios.

The proposed rulemaking solicits comment on two alternative methods for determining the amount of capital a bank may need to account for IRR. One method ("Minimum Capital Standard" approach) would impose an explicit minimum capital charge based on the amount of measured IRR exposure in excess of a supervisory threshold. The other method ("Risk Assessment" approach) would not introduce an explicit minimum capital charge into the risk-based capital standard, but rather would assess the need for capital on a case-by-case basis, considering both the level of measured exposure and qualitative factors. These factors would include a bank's IRR management, internal controls, and the overall financial condition of the bank, including its earnings capacity, capital base, and the level of other risks which may impair future earnings or capital.

Institutions with little derivative activity and that otherwise appear to have little interest rate risk would be exempt from any additional reporting. Those with a notional value of derivative contracts in excess of 10% of assets would be required to report expanded data on their derivative positions to enable supervisory assessment of the interest rate risk exposure of the positions and their contribution to the overall risk profile of the institutions.

(2) OCC Proposed Rule on Collateralized Transactions: The OCC published a Notice of Proposed Rulemaking on Collateralized Transactions which would amend the risk-based capital guidelines to lower the risk weight from 20% to 0% for particular transactions that are collateralized by cash or government securities. This risk-based treatment would more accurately reflect, according to the OCC, the minimal operational risk and the near absence of credit risk for certain transactions. Although not specifically listed as a type of transaction covered by the proposed rule, the OCC requested comment upon, and is considering including, collateralized financial derivatives counterparty exposures among the transactions that could receive a 0% risk weight. The OCC anticipates working with the FED and the FDIC to ensure a uniform application of collateralized transactions rules.

(3) Basle Committee Proposals: When the Basle Accord was reached in 1988, authorities recognized its limitations, including the need to develop capital standards for market risks such as interest rate and foreign exchange risks. In April 1993, the Basle Supervisory Committee issued a series of comment papers that propose capital standards for:

- Market risk, including foreign exchange risk; and
- Netting as applies to credit risk.

The papers propose capital standards for the market risks arising from an institution's traded debt and equity securities, and from their overall foreign exchange

exposures, including any derivatives that are part of an institution's trading book. The initial consultative period for these papers closes on December 31, 1993. These efforts, if adopted, will likely result in increased reporting disclosures for the market risks associated with derivative activities in trading portfolios and foreign exchange contracts.

Concurrently, the Basle Supervisory Committee issued a proposal that would amend the 1988 Basle Accord to recognize certain legally binding netting arrangements between counterparties (bilateral netting) on derivative products.

On April 30, 1993 the FED issued for comment the Basle Proposals regarding netting, market risk, and interest rate risk (the interest rate risk proposal does not include an explicit capital charge at this time). The OCC anticipates issuing a notice of proposed rulemaking by the end of 1993 to solicit public comment on the issue of whether the risk-based capital guidelines should be amended to recognize bilateral netting arrangements.

The Basle Committee Sub-Group on Off-Balance sheet activities is also reviewing the current risk-based treatment of derivatives for counterparty risk. This review could lead to recommended changes in the factors used to estimate "potential future" counterparty risk for some financial derivatives. This work is still under discussion by the Basle Committee's sub-group and no formal proposal has yet been made.

Capital Standards for Broker-Dealers

Current and Proposed Capital Standards

Securities firms, or broker-dealers, engaged in derivative activities involving securities are required to be registered with the SEC and are subject to the SEC rules that require, among other things, broker-dealers to maintain certain specified minimum levels of net capital.

The derivative dealing activities which take place in unregistered (not registered with the SEC) affiliates of securities firms are not subject to the net capital rule. Those derivative activities interpreted by securities firms not to be securities activities are conducted in the unregistered affiliates. These activities typically include most swaps, primarily interest rate and currency swaps, and certain other OTC derivative instruments. The SEC has been informed by certain broker-dealers that the capital requirements necessary to conduct OTC derivative activities in registered, vs. unregistered broker-dealers is one factor that has encouraged certain derivative activities to be conducted in unregistered affiliates. Futures and options on futures are regulated by the CFTC, are not considered securities, and are therefore traded in affiliates registered with the CFTC, namely FCMs.

All other derivative activities interpreted by securities firms to be securities

activities must be conducted in a registered broker-dealer and are subject to the net capital rule. Activities typically considered by securities firms to be securities activities include exchange-traded options on securities, exchange-traded options on indices of securities, exchange-traded options on foreign currency, and OTC equity index options.

Net capital is defined as a broker-dealer's net worth computed in accordance with GAAP, plus satisfactory subordinated liabilities, less assets not readily convertible into cash and most unsecured receivables. The broker-dealer then subtracts prescribed percentages (or haircuts[9]) from the market value of its securities and commodities positions to account for market and credit risk. The rule also requires broker-dealers to mark their securities and commodities positions to market value on a daily basis.

Although the current capital rule contains treatment for derivative products transactions, much of the rule's current structure was developed prior to the recent growth and development of the OTC derivative markets. The SEC, therefore, is considering different approaches to the treatment of derivative products under the net capital rule in order to evaluate whether the net capital rule should be modified in light of developments in the derivative markets, generally, and the OTC market in particular. Therefore the SEC issued for comment the SEC Net Capital Concept Release No. 34-32256 dated May 4, 1993. The comment period for the Concept release has been extended to December 17, 1993.

Three approaches are under consideration by the SEC. One approach under consideration would involve maintaining the current net capital rule. A second approach would devise capital requirements that comprehensively address the credit and market risks posed by derivative products so that firms could conduct their derivative activities in registered broker-dealers without what they often regard as undue capital constraints. A third approach, which could be combined with either of the first two approaches or implemented separately, would be to formulate separate capital guidelines that would specifically apply to DPCs that are registered broker-dealers.

The current treatment of various derivative products under the net capital rule (Rule 15c3-1 of the Securities Exchange Act of 1934) is summarized below, together with alternative approaches presented in the Concept Release.[10]

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[9] A "haircut" is a deduction taken in a firm's capital computation in order to account of specific risks and uncertainties and is enumerated in regulatory capital rules. The intended regulatory result is that a firm's capital, after the deduction of all required haircuts, will be the amount of liquid capital a firms has, after a reserve has been set aside of market contingencies.

[10] The Concept Release does not include any analysis of the status of particular derivative contracts under the federal securities laws.

Summary of the Current Net Capital Rule and the Proposed Net Capital Rule Set Forth in the Concept Release

(1) Market Risk

(a) Standardized Options: The net capital rule provides for two different capital treatments: the first approach assumes that options will be exercised or held to expiration; the second approach assumes that options will be traded. Both approaches generally assess minimum charges for uncovered option positions or recognized option strategies.

The Concept Release proposes adopting a theoretical pricing model system developed by the Options Clearing Corporation to determine haircuts.

(b) OTC Options: Long positions in OTC options generally are treated conservatively under the net capital rule because of the attendant credit risk and their limited liquidity. This conservative treatment requires broker-dealers to deduct the full time value premium of OTC options from their net worth. In addition, broker-dealers are required to apply a haircut on the option's intrinsic value. Moreover, as a general rule, no preferential hedging or spread benefits are allowed for long OTC options.

The Concept Release requested comments on whether a pricing model for determining haircuts, similar to that being considered for standardized options, could be used for OTC options.

(c) Futures Contracts and Options on Futures Contracts: Capital charges for futures contracts and options on futures contracts are based on the margin requirements of the applicable commodity clearing organization. If these instruments are hedged by securities products, capital charges generally are determined by the net capital rule and the interpretations thereunder.

The Concept Release did not propose any changes.

(d) Forward Contracts: The net capital rule assesses a capital charge on forward contracts in currency, commodities, and U.S. government securities equal to the haircut applied to the underlying instrument. In addition, in order to account for the credit risk associated with forward contracts, the unrealized profit on a particular forward position is considered to be an unsecured receivable under the net capital rule, and therefore is subject to a 100% capital charge.

The Concept Release suggests an alternative capital charge for the market risk related to currency forwards. The SEC feels that the market risks related to forward contracts for commodities and U.S. government securities are adequately addressed under the existing net capital rule. The Securities Industry Association (SIA) has proposed a net capital treatment of currency forwards on which the SEC seeks

comment in its Concept Release. The proposal for market risk would assess a capital charge on the net long or short position of all uncovered currency positions. The amount of the capital charge would depend upon to which of three categories the currency position was assigned. The proposal would apply one charge to any long currency position offset with a short position of any other currency. The charge on the matched position would be equal to the charge on the currency in the category with the highest capital charge of the two categories involved.

The Concept Release also requested comment on the need to account for interest rate risk in currency forwards by an approach that would result in assigning currency forward positions to maturity bands and assessing a capital charge for interest rate risk depending upon the maturity of each specific contract.

(e) Interest Rate Swaps: The SEC has been told that few swaps are booked in a registered broker-dealer because of the treatment accorded to swap transactions by the net capital rule. The first component of the capital treatment for interest rate swaps requires the current value of the next interest payment due from the interest rate swap to be considered an unsecured receivable and to be deducted from net worth in arriving at net capital. The second component of the capital treatment of interest rate swaps requires a deduction or haircut on the notional amount of the swap. The amount of deduction depends on the maturity of the swap and whether the broker-dealer has offset the swap.

The Concept Release presented two alternative approaches. The first approach would calculate exposure from a large interest rate swap book into a portfolio of specified debt securities that are equivalent, in terms of interest rate sensitivity, to the swap payment flows. These derived securities would then be treated under the net capital rule in the same way as actual bond positions with the same characteristics. The value of the derived securities would be calculated in terms of the zero coupon bond equivalent. The second approach is to assign the notional amount of the swaps to the maturity bands currently in use for government securities, and apply a capital charge, ranging from 0-6%, depending on maturity. The capital charges of long and short positions in swaps could be offset depending on the relative maturities of the two swaps, or could be hedged with other debt instruments.

(f) Currency Swaps: Under the net capital rule, currency swaps are treated as two currency forwards, one long and one short.

The Concept Release requested comment on the application to currency swaps of the proposed treatment of currency forwards.

(g) Equity Swaps: Under the net capital rule, broker-dealers are required to consider the next net payment amount as an unsecured receivable, and, therefore, must deduct that amount from net worth in arriving at net capital. In addition, broker-dealers are required to take a deduction on the notional amount of the equity swap equal to the haircut applicable to the underlying position.

The Concept Release invited comment on alternative methods of determining a capital charge.

(2) Credit Risk

Unlike exchange-traded derivative products, OTC derivatives involve credit risk. The SEC did not request comments on the credit risk involving centrally-cleared, exchange-traded transactions. Instead, the SEC requested comment on the appropriate capital treatment to reflect the credit risk in OTC derivative products. Historically, unsecured credit extensions have not been a significant element of a broker-dealer's business and, as a result, the net capital rule treats very conservatively positions that entail unsecured credit risk. Because the unrealized profit on OTC derivatives generally is considered to be an unsecured receivable, broker-dealers are required to deduct 100% of this amount from net capital. This capital charge is assessed in addition to any applicable capital charge for market risk.

The Concept Release issued for comment two approaches for the determination of capital charges on the credit risk of derivative products. The first is an SIA approach[11] which recommends assessing a credit risk capital charge for OTC derivatives consisting of two distinct charges.

The first charge would be a basic credit charge. The basic charge would require an 8% charge on the "credit equivalent amount" multiplied by the "counterparty factor" for a given counterparty. The value obtained by marking-to-market also may be referred to as "the deficit." The net deficit for a counterparty would be reduced by any margin or certain deposits and margins. The counterparty factor proposed by the SIA is 0% for Zone A central governments and central banks and is 20% for Multilateral Development Banks, Zone A regional governments, and Zone A credit institutions. The counterparty factor is 50% for all other entities. The second charge is the concentration charge. The concentration charge is meant to discourage a firm from assuming a large amount of credit risk with any one particular counterparty or from assuming too much overall credit risk. This charge would require the broker-dealer to take a charge equal to the sum of: (1) the amount by which the net deficit with one counterparty exceeds 10% of the firm's tentative net capital and (2) the amount by which the net deficit as to all counterparties exceeds 25% of the firm's tentative net capital.

The second approach proposed by the Concept Release would require the broker-dealer to take a capital charge based on some percentage of the broker-dealer's total exposure to all counterparties. The amount of the charge on the particular exposure would depend on the credit rating of the counterparty. This approach could also call for an additional base amount of capital.

The Concept Release asked for comment on Derivative Products Companies

[11] The SIA recommended an approach to address the credit risk of currency forwards which could be applicable to all derivatives.

(DPCs) which are triple A rated subsidiaries of broker-dealers that provide the parent with a vehicle for participating in derivative products transactions through an increased credit standing. Assuming DPCs are registered with the SEC pursuant to the Exchange Act (they are currently unregistered), the SEC invited commentators to discuss whether Rule 15c3-1, the net capital rule, should be amended to recognize DPCs as a special class of broker-dealer with rules specific to their business. The SEC asked if the current financial responsibility rules are appropriate for DPCs.

CFTC Requirements

Capital Requirements

Relevant aspects of the CFTC's calculation of regulatory capital also are harmonized with SEC requirements. For example, the CFTC follows the SEC haircuts for the market risk of proprietary positions in instruments subject to SEC jurisdiction. The CFTC currently does not permit those it regulates to grant OTC commodity options and charges significant haircuts for forward contract obligations.

Unlike banking regulatory capital requirements, the capital requirements of the CFTC and the SEC are so-called "liquid capital" rules. Liquid capital rules are designed to assure that assets can be readily marshalled and liquidated in an emergency situation for the protection of customers and other creditors.

Margin Requirements

The CFTC was asked to discuss margin requirements. Historically, margin requirements for futures contracts have been established by the designated futures exchanges, subject to CFTC authority to set margin levels to address market emergencies. Under Section 8a(9) of the CEA, the CFTC has broad emergency powers applicable to all futures contracts "to direct the contract market, whenever it has reason to believe that an emergency exists, to take such action as in the CFTC's judgement is necessary to maintain or restore orderly trading in or liquidation of any futures contract, including, but not limited to, the setting of temporary emergency margin levels on any futures contract..." The CFTC also has plenary authority over operations margin systems for exchange-traded options subject to CFTC jurisdiction.

In addition, the Futures Trading Practices Act of 1992 amended the CEA to provide, among other things, for review by the Board of Governors of the Federal Reserve System of contract market rules establishing or changing the levels of initial and maintenance margins for stock index futures contracts or options thereon. The amendment requires filing of such rules with the Board and specifies that the Board may request or direct the contract market to set margin levels "appropriate to preserve the financial integrity of the contract market or its clearing system or to prevent systemic risk." On March 22, 1993, the Board delegated to the CFTC its day-to-day stock index margin authority under the provision of the Act. The Federal

Reserve Board has reserved the right to exercise its authority in emergency circumstances such as a market disruption. Thus, the CFTC now has authority to review margin levels for stock index futures or options contracts, and to request or direct a contract market to set such margins at specified levels, subject to judicial review.

Question #3 (FED, OCC, FDIC, and OTS)

Please discuss which types of derivative instruments institutions under your jurisdiction are, and are not, permitted to utilize. Please distinguish between the types of derivatives institutions are, and are not, permitted to utilize for different functions including trading for customer accounts, trading (revenue) for their own accounts, and hedging for their own accounts. Please indicate the relative use of different derivative instruments by such institutions. In addition, please indicate the relative use of derivatives by such institutions for the different functions mentioned above.

The Federal Reserve Board (FED)

The FED is the primary regulator of bank holding companies and state-member banks. The FED also has authority over the activities of foreign branches of member banks, Edge and Agreement Corporations, foreign subsidiaries of bank holding companies, and foreign banking organizations with operations in the U.S.

The FED supplied data showing the derivative holdings of U.S. bank holding companies, state-member banks, and the 10 holding companies with the most derivative contracts. As of June 1993, 215 of the 1,154 bank holding companies reported some form of derivative activity. Of the 1,154 holding companies, 151 (10%) reported interest rate swaps, 120 (8%) reported commitments to purchase foreign exchange in the form of spot, forward, and futures contracts, and 13 (1.1%) reported commodity or equity swaps. Large institutions dominate the domestic banking industry's activity in derivative markets with the 10 largest holding companies, ranked by notional value, holding over 90% of the total derivatives reported by U.S. bank holding companies. In terms of notional amounts, 22% is comprised of interest rate swaps, 19% domestic futures or forward rate contracts, 34% foreign exchange contracts, and 2.2% commodity and equity contracts.

Bank Holding Companies

Under the Bank Holding Company Act, a bank holding company generally may not engage in any activity or own shares of any company engaged in any activity other than banking or managing or controlling banks, subject to certain exceptions, e.g., that the activity is closely related to banking or a proper incident thereto. Subject to prior approval, the FED has generally permitted bank holding company nonbank subsidiaries to engage in certain foreign exchange transactions, including OTC derivative transactions, either as agent for customers or for their own account for hedging purposes. Bank holding companies and their nonbank subsidiaries also are permitted to engage in either exchange-traded or OTC derivative transactions incidental to other approved activities in order to hedge exposure arising from those activities.

Bank holding company nonbank subsidiaries also generally have been permitted, subject to prior approval, to act as Futures Commission Merchants (FCMs) in executing and clearing certain exchange-traded derivatives linked to bullion, foreign exchange, government securities, certificates of deposit, other money market instruments, and stock and bond indices, either as agent for customers, or for their own account for hedging purposes. FCMs are regulated by the CFTC. The FED has also approved one nonbank subsidiary to trade in a group of nonfinancial futures, subject to the constraint that these activities be performed as agent for customers and not for the institution's own account except as necessary to limit damages in the event of a customer's default.

In a small number of cases, the FED has permitted nonbank subsidiaries to trade certain exchange-traded derivative instruments linked to government securities and money market indices for their own account for purposes other than hedging. The FED also has permitted a limited number of nonbank subsidiaries to engage in interest rate and currency swaps and related transactions, including swap option contracts, as principal or agent, for purposes other than hedging. One such subsidiary has been permitted to buy or sell for its own account OTC option contracts linked to government securities for purposes other than hedging.

Derivative dealing activities do not in practice take place at the bank holding company level, but instead take place at a bank or non-bank subsidiary level. Derivatives utilized in an end-user capacity can be used at both the bank holding company level and a bank or non-bank subsidiary level.

State Member Banks

State member banks are chartered under state law and must have authority under their state charters to engage in derivative transactions.

The FED cannot authorize a state-member bank to engage in an activity that would not be permissible under applicable state law, but can under some circumstances limit or condition the activities of state-member banks. Generally, activities related to OTC interest rate and foreign exchange derivatives are considered to be sufficiently related to traditional bank activities in foreign exchange and the management of interest rate exposure. State banking authorities in a number of states, therefore, have permitted state-chartered banks in their jurisdictions to engage in such transactions as brokers or agents, or for their own accounts, either to hedge existing positions or to generate revenue.

State member banks in some states have been permitted to utilize exchange-traded interest rate and foreign exchange derivatives to hedge interest rate or foreign exchange exposure. In a least one state, banks are permitted to act as FCMs engaging in trading for customers and for their own account in exchange-traded interest rate and foreign exchange derivatives. This activity generally takes place in a bank subsidiary.

Additionally, a limited number of state member banks engage in derivative transactions linked to commodities or equities. Some of these transactions are related to traditional bank activities in commodities such as gold and silver, but some state member banks have obtained the approval of their state regulatory authorities for activities involving a broader array of commodity-linked or equity-linked transactions.

The FED has required state member banks acting as principals in derivatives linked to commodities or securities, that they do not have the authority to purchase and hold directly, to obtain the approval of the FED to continue such activities, unless the transactions are entered into on a perfectly matched basis. State member banks that currently are not engaged in such transactions will be required to seek the approval of the FED to commence such activities in the future. The FED is currently reviewing these activities.

The State of New York Banking Department has generally held that derivative activities are closely related to banking and, with certain limitations, are therefore permitted. Banks that wish to newly engage in such activities generally gain approval from the Department on a case-by-case basis.

Foreign Branches of Member Banks

Generally, a foreign branch of a member bank is permitted to engage in all of the activities authorized under the bank's charter. To the extent permitted under local law, foreign branches of a national bank may engage in the full range of OTC derivative transactions permitted under the bank's charter. Foreign branches of state member banks may also engage in such activities consistent with their charter, subject to the FED's approval with respect to commodity- and equity-linked transactions.

Edge and Agreement Corporations

Domestically, an Edge or Agreement corporation may engage in foreign exchange activities, which may include derivative transactions. Outside of the U.S., such corporations, usually through subsidiaries, may act as FCMs to engage in transactions for the accounts of customers or for their own account for hedging purposes, and may act as a principal or agent in swap transactions for hedging or trading purposes, subject to the approval of the FED for transactions linked to commodities.

Foreign Subsidiaries of Bank Holding Companies

As with Edge corporations, foreign subsidiaries of bank holding companies may act as FCMs to engage in transactions in exchange-traded derivatives for the account of customers or for their own account for hedging purposes, and may act as a

principal or agent in swap transactions, subject to the approval of the FED for transactions linked to commodities.

Foreign Banking Organizations with Operations in the U.S.

A federal branch of a foreign bank generally may engage in the same derivative activities as a national bank. State-licensed branches or agencies may engage in derivative activities permitted by their state licensing authority, and at least one state has permitted state-chartered banks to engage in a broad range of derivative activities, and has permitted state-licensed branches and agencies to engage in the same activities. Such state-licensed branches and agencies may not engage in any activity that is not permissible for a federal branch unless specifically approved by the FED, and in the case of an insured state branch, the FDIC. The non-banking operations of a foreign banking organization that maintains a branch, agency, or subsidiary bank in the U.S. are subject to the same limitations on derivative activities as U.S. operations of domestic bank holding companies.

Office of the Comptroller of the Currency (OCC)

The OCC is the regulator of national banks and their derivative activities. The OCC regulates the derivative activities of national banks who act as both dealers and end-users of derivatives.

The OCC has emphasized the role of national banks as financial intermediaries in the derivative markets, performing functions that are part of the business of banking related to making loans and taking deposits. National banks and their subsidiaries have been given the authority by the OCC to enter into a wide array of derivative transactions and instruments, both for their own accounts and to accommodate their customers as dealers. A national bank may enter into derivative transactions as principal in order to hedge risk exposures arising from its investment portfolio or non-dealer operations. In addition, a national bank may enter into derivative transactions for its own account as incidental to its authorized dealer-bank trading activities, where the bank may lawfully purchase and sell the underlying instrument or product for its own account.

A national bank is also authorized to enter into derivatives transactions as an agent, or dealer, for its customers or as principal in transactions where the bank is serving as a financial intermediary for its customers, whether or not the bank has the power to act as principal for its own account with respect to the underlying instrument or product. Thus, for example, the OCC has permitted national banks to establish operating subsidiaries that function as Futures Commission Merchants (FCMs) by soliciting, accepting, and executing customer orders for futures and options. The OCC has also permitted national banks to enter into matched and unmatched commodity price index swap transactions in order to assist their customers in limiting certain financial risks resulting from fluctuations in commodity prices, and to hedge

such transactions on a portfolio basis.

The OCC has also permitted national banks to hedge a financial exposure arising from otherwise permissible activities in markets that involve physical delivery of commodities. In connection with such hedging activities, a national bank may make or take physical delivery of commodities, transfer or receive transfer of documents of title, and engage in other incidental activities. This activity was further described in OCC Banking Circular 277 released on October 27, 1993. The OCC stipulated, however, that only a nominal percentage of hedging transactions should actually be physically settled, and that such physical hedging transactions must be customer driven. The OCC further stipulated that a national bank may not use physical hedging transactions as a means to speculate in commodity price movements. Any national bank that wishes to engage in physical hedging activities must obtain prior written authorization of the OCC.

In general, national banks are permitted to use derivative products as long as the activities are consistent with the bank's policies and procedures, and safe and sound banking practices.

The OCC supplied charts showing the derivatives holdings of 25 national banks with the largest holdings in selected derivative products.

The Federal Deposit Insurance Corporation (FDIC)

The FDIC is the primary federal regulator of state non-member banks and their derivative activities. The state banks are chartered under state law and must have authority under their state charters to engage in derivative transactions. According to industry sources, no state non-member banks are currently dealers in derivatives. State non-member banks act only as end-users.

According to the FDIC, state non-member banks use derivatives primarily in the context of hedging and portfolio management strategy. Even though, aside from individual state statutes, there are no legal prohibitions on speculation and trading in derivatives for a state non-member bank's own account, the size and technical expertise of such institutions generally make these derivative activities impractical. Relative to the money center banks, the use of derivatives by state non-member banks is comparatively slight. Also according to the FDIC, state non-member banks are also unlikely to be active in the utilization of derivative instruments on behalf of customers as dealers. Customers sufficiently large and sophisticated enough to be involved in such activities would generally transact such business with larger institutions.

Section 24 of the FDI Act regulates the permissible activities of state banks by utilizing the same standards that apply to national banks. Under Section 24, certain types of "investments" are prohibited for state non-member banks. For example, state banks are generally not permitted to invest in equity securities. This prohibition would appear to include stock options. With regard to the purchasing of commodity

futures for its own account, according to the FDIC, it is unclear whether or not this is a permissible activity. A transaction which violates a criminal statute, an applicable state statute, is inherently unsafe and unsound, or violates Section 30 of the FDI Act pertaining to Adverse Contracts, would be prohibited.

Even if an individual institution is financially capable and is attempting to use these instruments as part of a risk reduction strategy, the FDIC could determine that involvement in derivative product activities would be "unsafe and unsound" based entirely on the specific technical inability of existing management.

Relative to money center banks, the use of derivatives by state non-member banks is comparatively slight. At one point, as much as 98% of all bank derivative activity by volume, was concentrated in the largest banks and bank holding companies. Virtually all domestic bank dealer activity continues to occur in a handful of money center banks.

Office of Thrift Supervision (OTS)

The OTS has authority over the use of derivatives by thrifts. Thrifts are end-users of derivatives and do not act as dealers. Thrifts that use derivatives are expected by the OTS to use them to reduce risk. OTS rules for futures require that institutions enter only into interest-rate related contracts, and use such futures only to reduce interest rate risk. Institutions are not permitted to enter into futures contracts for purposes other than interest rate risk reduction. Similarly, options contracts are to be used only to reduce interest rate risk.

As of June 30, 1993, 117 of 1,822 thrifts reported off-balance sheet derivatives. Of these, 82 institutions reported holdings of swaps, 43 reported options, and 20 reported futures. The OTS supplied charts showing such holdings.

Question #3 (SEC and CFTC)

Please discuss the types of dealers and end-users of derivatives that are not regulated in any manner. Do you feel that the derivative activities of such dealers and end-users should be regulated?

The SEC stated that certain entities, such as corporations, pension plans, certain institutional investors, and unregistered subsidiaries and affiliates of broker-dealers and other financial service enterprises may be required under certain circumstances to report investment holdings to federal or state regulators. The SEC stated that it has been informed by certain broker-dealers that the capital requirements necessary to conduct OTC derivative activities in registered broker-dealers is one factor that has encouraged derivative activities to be conducted in unregistered affiliates, and therefore the SEC is proposing to modify its capital rules to make it more feasible for such activities to be conducted in the registered broker-dealer.

The SEC stated that given the diversity of dealers and end-users, any single system for the effective regulation of derivative activities is likely to be unduly broad and impracticable.

The CFTC stated that unregulated entities are an area in which the CFTC finds the data currently insufficient. The CFTC did note that concerns have been expressed about apparent concentrations of OTC derivative activities in large dealers, some of which are unregulated. The CFTC identified the need to obtain such information on an interagency basis before any specific recommendations are made regarding regulation of dealers and end-users. The CFTC did suggest that regulators stress sound internal controls by all derivative participants. The futures regulatory framework of the CFTC generally does not provide for regulation of end-users but imposes speculative position limits or position accountability requirements that are designed to provide protection against price manipulation and requires reporting of the positions of large traders to facilitate market surveillance.

Question #4

Please discuss the benefits that may be realized from utilizing derivative instruments, such as using them for risk management and asset-liability management purposes.

Could the development and use of derivative products by savings and loans (S&Ls) and others have helped to prevent the S&L crisis? For example, could the use of interest rate swaps by S&Ls have helped them to sufficiently control duration and interest-rate mismatches? (Especially mismatches due to long-term mortgage assets yielding low interest rates being combined with short-term liabilities commanding high interest rates.)

Benefits Realized from Utilizing Derivatives

The regulators agreed that the growth of the derivatives markets has increased financial market efficiency and provided market participants with an expanded array of tools for risk management.

The major benefits derived from the use of derivatives listed by the regulators include:

1) Risk Management and Asset/Liability Management: Derivative instruments, both exchange-traded and OTC, can be used to manage exposure to various types of risks, including interest rate risk, currency risk, equity price risk, and commodity price risk through hedging.[12] For the vast majority of U.S. financial institutions, the present use is to manage interest rate risk present in their assets and liabilities. Derivatives allow institutions to alter the payment or maturity structure of available funding sources to more closely match those of a desired but unavailable source. Conversion of a floating rate funding source to a more predictable fixed rate, or the creation of a lower cost floating rate debt instrument from a fixed rate instrument through the use of swaps are examples of derivatives use. The primary advantage of derivatives is their ability to alter the risks on the balance sheet more quickly and cheaply than could be done through adjustments of traditional assets or liabilities, as was done prior to the introduction of derivatives. By using derivatives, financial institutions can disaggregate the risks that are often found in traditional financial instruments, and transfer such risks to parties that are better suited or more willing to take on and manage those risks.

2) Broaden Access to Capital Markets and Reduce Funding Costs: An institution may enter markets where it can obtain the best relative terms of funding

[12] Hedging is the process of taking a position in an instrument that produces a price movement which is opposite to that of an existing or anticipated position, with the goal of protecting that existing or anticipated position against loss due to fluctuations in prices or rates. The two principal approaches to hedging using derivatives are: forward strategies, which attempt to lock in a specific rate or yield over a given time frame by eliminating interest rate or currency risk; and option strategies, which attempt to protect against adverse market movements while leaving open the possibility of capitalizing on favorable movements.

and then, through the use of derivatives, can adjust its obligations to obtain the most desired financial structure. The enhanced access to capital markets increases the possibilities for efficient funding and investing. Hybrid instruments allow institutions to combine a debt instrument, such as a bond, with a derivative. Such a combination may allow an institution to borrow at a lower rate.[13]

3) Enhance Ability to Better Serve Needs of Customers: The use of derivatives has enabled institutions to better satisfy customer demands for specific types of products, such as fixed-rate mortgages, by enabling institutions to better manage the risk associated with those products.

4) Revenue Source: Institutions can generate revenues from dealing or "market making", risk arbitrage, and speculation. Dealers enter into derivative transactions with customers who wish to utilize the derivative instruments for risk management or other purposes. The dealer then profits by maintaining a generally balanced portfolio from which they earn a bid/offer spread by pricing each deal slightly differently. Arbitrage traders profit from small discrepancies in prices among similar instruments in different markets. Speculators profit by accepting the risk that stems from taking outright, unmatched positions in anticipation of price movements.

5) Reduce Exposure to Price Risk: The CFTC stated that for the past 130 years, futures contracts on agricultural commodities have represented a common form of derivative instrument, and the benefits of these contracts to those involved in agriculture are well known. By establishing positions in the futures markets opposite to cash market positions or obligations, participants in agricultural markets have been able to reduce their exposure to price changes. For example, a loss to a producer due to a fall in the price of his commodity can be offset through gains that accrue on a futures contract when prices fall. In addition, by using futures, a producer can lock in a price for his commodity in the future, thus stabilizing revenue flows. Others in the marketplace benefit from the price discovery function of the futures market due to publicized prices. Futures on financial instruments and foreign currencies are used by companies who sell goods overseas to reduce their exposure to currency prices. Futures allow investment managers to manage the risk of their portfolio and to diversify the mix of products by utilizing equity or bond futures. Options, swaps and hybrid instruments were developed later and display many of the same benefits as futures, with the added benefit of customization.

Use of Derivatives to Help Prevent the S&L Crisis

Many of the derivatives used today to manage interest rate risk, such as swaps, interest rate options, and certain futures contracts were not developed until after the

[13] For example, an oil company can issue a hybrid bond which pays annual interest but also ties the principal repayment to the price of oil. That is, if the price of oil rises, a larger repayment is made. Such an instrument may allow the oil company to issue the bond at a lower interest rate since the instrument represents a better credit risk because the company is asked to pay more when it is in a position to do so and less when it is not.

rate shocks of the late 1970s and early 1980s. According to the FDIC, those instruments that were in existence and used by S&Ls during the 1980s effectively reduced interest rate risk and duration mismatches, as the instruments do today.

The general consensus among regulators was that derivatives could have helped S&Ls manage interest rate risk and repricing mismatches, therefore avoiding many of the losses that resulted from the sharp increase in short-term rates that occurred in the late 1970s and early 1980s. If used properly, there is little doubt, according to the OTS, that derivatives would have helped to prevent the S&L crisis.

The FED stated that when short-term interest rates rose in the early 1980s relative to the existing fixed-rate assets, the profits of the S&Ls declined and losses were incurred as the cost of short-term liabilities exceeded the earnings for the fixed-rate mortgages. Hedging this type of exposure can be undertaken by obtaining a derivative instrument that produces profits as short-term interest rates rise. For example, an S&L can hedge its exposure by entering into an interest rate swap in which an S&L agrees to receive from a counterparty floating-rate payments based on a short-term interest rate (any rate that tends to move in concert with rates paid to their depositors) and agrees to make a periodic payments to the counterparty based on a fixed rate (which coincides with its fixed-rate mortgages).

Question #5

5 a) What are your primary regulatory concerns regarding derivative activities of institutions supervised by your agency?

Banking Agencies

The primary regulatory concerns of the banking agencies related to derivative activities included:

1) The volume and complexity of derivatives affects both the ability of examiners to evaluate a bank's activities and the ability of bank management, itself, to identify, understand, and control the risk management process. These concerns extend to the evaluation of capital adequacy, the adequacy of internal controls, and any potential effects on interbank clearings and systemic risk. Concerns also arise as to the integrity and reliability of the payments system.

2) Regulators may over-react to the expansion of derivative activities and needlessly discourage activities that would reduce risk or enhance the profitability and stability of the banking industry.[14]

3) Banks that engage in derivative transactions, either as dealers or end-users or both, should appropriately manage the credit, market, liquidity, operational and settlement risks arising out of derivative transactions and have exposure limits to control these risks.

4) Banks should maintain the appropriate level of capital reflecting risks associated with derivatives.

5) The Board of Directors and senior management should understand derivatives, approve a strategy for utilizing derivatives, and properly supervise the use of derivatives. Management should not unduly rely on the trading acumen of various brokers, dealers, or consultants.

6) All banks should use derivatives properly to reduce funding costs, diversity funding sources, and reduce and manage risk. In addition, all banks should not be taking imprudent risks or taking positions that unduly expose them to changes in rates and prices.

7) Banks newly engaged in derivatives dealing activities should have the adequate level of sophistication in systems and personnel.

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[14] The FED stated that before introducing additional regulations or regulatory standards regarding derivatives, the objectives that the regulations are intended to achieve should be identified as well as whether private sector initiatives are a more effective way to meet those objectives. One must be mindful of the potentially adverse effects of regulation on competition, efficiency, and innovation in the OTC derivative markets. The regulators feel that regulation cannot substitute for effective risk management.

8) Employees should have the adequate level of expertise.

9) Institutions should have the ability to suitably measure both credit and market risk exposures for individual institutions and for groups of institutions.

10) The rate at which derivative exposures are accumulated should be monitored and controlled carefully.

11) Smaller institutions are vulnerable to speculative inducement and pressures.

SEC

The primary regulatory concerns of the SEC related to derivative activities included:

1) Customer Suitability: The customer base of the derivative markets, which began with only the largest, most sophisticated institutions, may reach the next tier of institutional investors. Certain derivative products, such as detachable call options on municipal bonds or collateralized mortgage obligations, are available to retail investors.[15]

2) Market Impact: The increased use of derivatives could lead to the failure of one or more derivative dealers during periods of extreme market stress, with this failure creating ripple effects throughout the OTC derivative markets for broker-dealers and other market participants.[16]

3) Market Interaction: Interrelationships between cash markets and derivatives trading exist and market volatility can be magnified to the extent a few large dealers dominate and are capable of moving a market.[17]

CFTC

The CFTC did not identify specific regulatory concerns, but instead described the regulatory regime they have in place for the exchange markets to address the financial integrity of the market, customer protection, and the efficiency of the market.

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[15] The SEC added that self-regulatory organization (SRO) and SEC rules already require broker-dealers to make suitability determinations before recommending customer trades, and the SROs and the SEC will not hesitate to enforce the anti-fraud provisions of the federal securities laws and SRO customer protection rules to ensure that broker-dealers refrain from recommending unsuitable products to uninformed investors.

[16] The SEC added that it controls market impact ramifications though reporting rules, the net capital rule, and the risk assessment program.

[17] The SEC added that the Market Reform Act authorized the SEC to promulgate rules to monitor the trading activity of certain large traders in the market. The SEC has also designed circuit breakers, established margin requirements, and has the authority under the Market Reform Act to suspend trading for a period of time.

Such regulations include capital requirements, reporting requirements, customer funds protections, clearing organizations, margin requirements, mark-to-market requirements, open outcry system, price and volume disclosure requirements, review of new products, prohibition of certain trade practices, and market surveillance programs.

5 b) Do you believe that any fundamental changes in the current regulatory framework for institutions using financial derivatives is needed at this time?

The agencies do not advocate major changes to the current regulatory framework. They feel that the current regulatory framework provides supervisors with adequate authority and flexibility to address concerns about the use of derivatives by institutions. The framework also permits institutions to engage in a broad range of derivative transactions, to innovate, to manage risk through the use of derivatives, to provide valuable risk management services to their customers, and to provide liquidity to the financial markets, while maintaining a sound banking system. The SEC stated that the existing securities regulatory structure protects investors and maintains market stability, while remaining flexible to innovation. The CFTC stated that while it does not recommend fundamental changes in the current regulatory framework for OTC derivatives, it does recognize certain risks inherent in OTC derivative activities.

The FED stated that it is aware of concerns that have been expressed about unregulated dealers and unsophisticated end-users and is in the process of evaluating whether regulatory changes are needed to address these concerns. In addressing these concerns, the FED noted that policy makers need to balance carefully the need to contain systemic risk, protect unsophisticated investors, and avoid moral hazard against the need to maintain efficient and internationally competitive markets.

The OCC stated that while it does have certain concerns regarding growth of derivatives and the complexity of derivatives, this does not lead to the conclusion that fundamental changes either in the law or the regulatory framework are needed at this time. In fact, the OCC believes that changes in the U.S. regulatory scheme that are enacted without careful consideration could deprive U.S. financial institutions (both financial and otherwise) of enhanced ability to manage risk, as well as restrict the flexibility of U.S. banks to be innovative and creative in developing risk management products that meet the changing needs of their clients. In addition, the OCC believes that most of the dealers of financial derivatives have good risk management systems. The OCC is encouraging proper internal controls and is strengthening its supervisory oversight of banks' financial derivative activities.

Recommendations by the agencies include the following:

1) The OCC requested the formation of an interagency task force to address the involvement of U.S. banks in derivative financial products.[18]

2) The FDIC suggested that joint bank regulatory examinations for major derivative dealers (banks and bank holding companies) could provide substantive benefits to all three agencies.

3) The OTS suggested that it may be useful to conduct an interagency review

[18] See OCC News Release #93-106 dated September 27, 1993.

of the capital treatment of derivatives under the risk-based capital standards to determine whether any changes to those standards are needed.

4) The OTS stated that it may be beneficial for regulators to encourage dealers and end-users of derivatives to comply voluntarily with the recommendations contained in the Group of Thirty Study.

5) The SEC stated that it hopes that any changes in the net capital treatment of OTC derivative products that develop from the SEC's review of its capital standards will encourage OTC derivative activities now conducted in unregistered affiliates of broker-dealers to be brought within registered broker-dealers under SEC jurisdiction.[19]

6) The SEC suggested that the establishment of one or more clearinghouses that specialize in the processing of trades in swaps may improve the current regulatory framework for the swaps market by helping to ensure the legal certainty of swaps transactions and by improving settlement efficiency through payment netting. A swaps clearinghouse also would provide a focal point for coordination of industry practices and communication with interested regulators. The SEC stated that while there are regulatory issues involved in the establishment of a swaps clearinghouse, regulators should actively evaluate the development of such facilities.

7) The CFTC recommended in its study on OTC derivatives[20] the establishment of an interagency council to identify common regulatory issues among agencies and foster regulatory coordination regarding derivatives. The CFTC stated that in light of the difficulty of obtaining basic information about OTC derivative transactions, the CFTC suggests that an early focus of the council should be information access. Other agenda items for the council should include issues related to pricing, disclosure, risk valuation, internal controls, and clearing facilities for OTC derivatives. The council is intended to supplement, not replace, efforts by individual agencies in areas of common interest.

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[19] The capital requirement necessary for effecting OTC derivative transactions through registered broker-dealers has been one factor among others, including business, economic, and legal considerations, in dealer decisions to conduct OTC derivative activities in unregistered affiliates or separately-capitalized DPCs.

[20] See the Report of the Commodity Futures Trading Commission, "OTC Derivative Markets and Their Regulation," CFTC, Washington, DC, October 1993. Chapter IV of the report contains recommendations.

Question #6

Is there adequate coordination between U.S. and foreign regulators to regulate risks associated with derivatives?

In general, regulators agree that coordination between U.S. and foreign regulators to regulate risks associated with derivatives is adequate in certain respects (provisions for monitoring credit risks associated with derivatives; appropriate level of capital required to support a bank's derivative activities), and needs improvement in other respects (accounting, legal and disclosure issues).

Because of the global scope of derivative activities, close interaction between U.S. and foreign regulators is critical. The FED noted that there has been a high degree of coordination between U.S. and foreign regulators since the mid-1970s, and added that this cooperation was largely catalyzed by the efforts that led to the 1988 Basle Capital Accord.

There are three principal forums which serve as motivators for international regulatory coordination regarding global derivative activities:

- **Basle Committee on Banking Supervision**

Established by the Central Bank of Governors of the Group of Ten (G10) countries in 1975,[21] the Basle Committee on Banking Supervision is the most noteworthy of the forums. The 1988 Basle Accord,[22] which defines minimum capital standards for the credit risk arising from on- and off-balance sheet activities of internationally active banks, including derivatives, is the Committee's most important achievement to date. The Accord strengthens prudential standards across the G-10 countries and provides for more competitive equality among internationally active banks.[23]

More recently, in April 1993, the Basle Committee released a series of proposals, the most important of which address market risks (including such risks associated with the derivative activities of large internationally active banks). Combined with the 1988 Accord, the FED noted (and it is widely supported) that these two frameworks provide a sound and adequate measure for addressing the credit and market risks associated with derivatives.

The FDIC qualified its assessment of "cooperation between U.S. and foreign

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[21] Member countries of the Basle Committee include Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Sweden, Switzerland, the United Kingdom, and the United States.

[22] The provisions of the Basle Accord, ratified in 1988 in the U.S., and in 1989 elsewhere, went into effect at year end 1992.

[23] Source: Board of Governors of the Federal Reserve System.

regulators...has been all that can reasonably be expected." The agency noted that although the April 1993 Basle Committee report does address two areas of concern (the legal, accounting and supervisory recognition of netting of outstanding derivative contracts, and the effect on capital adequacy calculations), further study was needed by the Committee in other areas, notably issues relating to future exposure [resulting from derivative activities] and a capital component attached thereto, and dealer disclosure.

Also regarding the Basle Committee proposals, the OCC believes that "there is adequate coordination...on the important issue of the appropriate level of capital required to support a bank's derivative activities." With regard to the accounting treatment and disclosure issues for derivatives, the OCC, similar to the other agencies, added that "additional international coordination could be helpful to derivative markets participants." Before accounting and disclosure efforts can be made in a global setting, however, the OCC believes that "these issues must first be addressed and resolved in the U.S."

The SEC has held and will continue to hold ongoing discussions with the Basle Committee regarding the appropriate regulatory treatment of derivative products.

The Office of Thrift Supervision reported that the agency has not been a party to the Basle Committee/Bank for International Settlements discussions, even though such discussions have potential implications for the capital standards applicable to savings associations. The OTS noted that it welcomes the opportunity to participate.

- **International Organization of Securities Commissions**

The International Organization of Securities Commissions (IOSCO), whose purpose is the development of international consensus on regulatory issues affecting cross-border financial services, is actively involved with U.S. regulatory agencies, in particular the SEC and the CFTC. The FED reported that the Basle Committee has also begun to establish closer ties with IOSCO.[24]

The SEC has been an active participant in working groups and committees of IOSCO, and is currently involved with the IOSCO Working Party on the Regulation of Secondary Markets that "...has been examining the issue of coordination between cash and derivative products."

The CFTC noted that "IOSCO provides opportunities for regulatory authorities to address matters of common concern." According to the CFTC, "regardless of whether formal arrangements with specific jurisdictions exist, the Commission continues to share information and cooperate on matters intended to ensure the integrity of the financial marketplace."

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[24] The FED noted that IOSCO and the Basle Committee were originally intended to release a joint market risk paper. Although the Basle Committee did issue a market risk proposal, it was not formally a joint product. Despite this, contacts between the Basle Committee and IOSCO represent a significant step towards strengthened coordination among regulators of various financial services.

- **European Commission**

The European Commission represents the European Community (EC), and has been working to harmonize prudential standards, including those for derivative products, for banks across the EC. The FED reports that there has been a significant level of coordination between the Basle Committee and the European Commission, and the EC Commission has maintained a representative on the Basle Committee.

The EC adopted minimum capital requirements in 1989 that closely mirror the capital standards of the 1988 Basle Accord, particularly as regards the standards for banks' derivative activities.[25] The EC is also working to harmonize minimum capital standards for the credit and market risk of a variety of new derivative products such as commodity-based derivatives.

It is important to note that there are a variety of other measures, outside of the above-referenced organizations, to provide coordination and cooperation between U.S. and foreign regulators. For example, the CFTC reports that it is a party to 21 agreements with 12 foreign jurisdictions to cooperate on a range of supervisory and enforcement matters. The SEC "continues to participate in discussions with the regulators of other countries with the goal of formulating consistent approaches toward the regulatory treatment of derivative products." However, the regulators emphasized that further cooperation and coordination is required.

[25] The influence of the Basle Committee and the Accord extend not only to the Basle Committee member countries and the EC, but also to many countries outside the G-10 or the EC, including a number of developing countries.

Question #7 (FED, OCC, FDIC, OTS, and SEC)

Individual derivative contracts, taken by themselves, include elements of risk. However, derivatives, when evaluated as part of an institution's entire portfolio, are often used to offset and reduce the overall risk exposure of an institution. How do your regulatory actions, including capital and accounting standards, take into account the use of derivatives to reduce the overall risk exposure of an institution? For the purpose of regulation, how does your agency distinguish between derivatives used to hedge and reduce overall risk, such as many over-the-counter (OTC) contracts, and derivatives used for trading and other purposes, such as many exchange-traded contracts?

The regulatory agencies do not consider either OTC or exchange-traded derivatives as one better suited than the other for purposes of hedging or speculating; i.e., each instrument can be used for both hedging or speculating.[26] Consequently, the regulatory agencies reported that their examination and supervisory treatment of derivatives is not predicated on the basis of these instruments being OTC or exchange-traded. The SEC qualified this by adding that the Commission does not distinguish between the use of derivative products for hedging purposes and their use for trading or other purposes, except in very specific circumstances. Rather, the FDIC noted, "regulatory action is based more on the manner of use of derivative instruments by an individual institution, the overall financial condition of the company, the quality of internal controls, and the specific technical competence of management." The FDIC added, "The financial strength, size, liquidity and control environment of the institution will...determine the extent to which involvement in derivative activities is acceptable."

Accounting and regulatory reporting treatment for financial derivatives is determined by the manner of use of such instruments. If a derivative is used for risk reduction purposes (hedging), then deferral, or hedge accounting treatment is permitted for the transaction.[27] This means that the gains and losses associated with the instrument in question can be deferred and realized on a basis consistent with the income or expense of the item being hedged. If a derivative is used for purposes other than risk reduction or hedging, then Generally Accepted Accounting Principles (GAAP) require that hedge accounting cannot be used, and the instrument must be accounted for in another manner (e.g., mark-to-market or lower-of-cost-or-market accounting). The GAAP standards must be followed for purposes of Y-9C reports and annual reports required under Section 112 of FDICIA.[28]

The hedge accounting framework is principally derived from FASB Statement

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[26] The OTS reported that both exchange-traded and OTC derivatives are used by thrifts for hedging purposes only.

[27] The FDIC noted that "Even if an individual institution is financially capable and is attempting to use these instruments [derivatives] as part of a risk reduction strategy, the FDIC could determine that involvement in derivative product activities would be "unsafe and unsound" based entirely on the specific technical inability of existing management."

[28] Source: Federal Reserve Board responses.

of Financial Accounting Standards No. 52, Foreign Currency Translation, and FASB Statement of Financial Accounting Standards No. 80, Accounting for Futures Contracts. Each statement sets forth different hedging criteria and related guidance. In particular, both standards require that derivatives be identified as hedging specific assets, liabilities, or transactions. Specifics on FASB Statements No. 52 and No. 80 are contained below.

- **FASB Statement No. 52**

FASB Statement No. 52 requires hedge accounting for foreign exchange contracts or transactions that are intended to hedge identifiable foreign currency commitments if:

  - The foreign currency transaction is designated as, and is effective as, a hedge of a foreign currency commitment; and
  - The foreign currency commitment is firm.

- **FASB Statement No. 80**

FASB Statement No. 80 permits hedge accounting if:

  - The item to be hedged exposes the enterprise to price or interest rate risk;
  - The futures contract reduces that exposure and is designated as a hedge;
  - At the inception of the hedge and throughout the hedge period, there is high correlation between the changes in the value of the futures contract and the value of the hedged item;
  - The significant characteristics and expected terms of an anticipated transaction are identified; and
  - It is probable that the anticipated transaction will occur.

Under Statement No. 80, use of hedge accounting requires the enterprise to perform an ongoing assessment of the effectiveness of the hedge throughout the life of the hedge. A significant difference between Statement No. 52 and Statement No. 80 is that No. 52 allows hedge accounting only for firm commitments, while No. 80 allows hedge accounting for anticipated probable transactions.

Question #7 (CFTC)

It has been stated that it is not always clear whether a derivative product is a futures or commodity option contract subject to the jurisdiction of the CFTC, a security subject to regulation by the SEC, or a traditional banking product subject to regulation by the federal banking regulators. Therefore, in many cases, regulatory jurisdiction is often claimed by several of these agencies. Please comment on this issue and on the decisions made by legislators and courts regarding this issue.

In recent years, marketplace innovations have produced so-called hybrid products which, by combining elements of futures contracts or commodity options with debt or bank depository interests, have given rise to questions as to which regulatory framework would apply to the product. As discussed more fully in response to **Question #1**, the CFTC has undertaken a variety of initiatives to clarify the status of hybrid instruments including, most recently, issuance of revised hybrid rules, effective February 22, 1993, which provide for regulation of hybrid instruments in accordance with the regulatory framework applicable to the dominant component of the instrument. The exemptive authority granted the CFTC under the Fair Trading Practices Act of 1992 assures that it will have the legal tools necessary to address issues that may arise in the future concerning the regulatory status of new forms of hybrid instruments.

Question #8

Recently published reports on derivative activities, such as the July 1993 Group of Thirty report entitled Derivatives: Practices and Principles and the May 1993 Institute of International Finance, Inc. (IIF) report entitled An Integrated Regulatory Approach to Derivative Activities stress the importance of internal controls over regulation in many areas. However, the Group of Thirty report has been criticized by some for relying too heavily on industry self-regulation.

8 a) Regarding banks, the IIF report states, for example, that banks themselves should develop trading and credit policies that set their own risk limits. Do you think that such maximum risk limits should be set by institutions or by regulators?

In general, the banking agencies felt that risk limits should continue to be set by the institutions themselves, and that regulatory agencies, as well as external and internal auditors, should continue to monitor and assess the adequacy of such risk limits and management controls.

The SEC, however, stated that regulation may be the only means of ensuring that risk, including systemic risk, is adequately addressed by participants. According to the SEC, there is no agreement among dealers and end-users on how to manage risk and it is unlikely that dealers and end-users would factor systemic risk into their individual risk calculation. For example, the Group of Thirty Report states that most small end-users do not perform stress simulations essential in determining the risks associated with either a single investment decision or the management of a derivative portfolio.

The SEC does not set maximum levels for the risks that may be assumed by a broker-dealer in taking a derivative position, but it applies the net capital rule to the proprietary accounts of broker-dealers, as well as to other activities, which, in the opinion of the SEC, effectively contains risk in proportion to a broker-dealer's total capital.

The banking agencies stated that regulators should seek to ensure that the capital, expertise, reserves, and operating procedures of a bank are commensurate with the level of risk inherent in any portfolio or activity both on- and off-balance sheet. The OCC added that the credit risk to which banks are generally exposed by virtue of their financial derivative transactions is substantially less than their credit risk exposure arising out of other off-balance sheet activities, many of which are subject to limits imposed by regulation. The regulators do not, as a matter of policy or practice, seek to mandate the degrees or level of risk assumed by what are determined to be sound, appropriately capitalized, well managed financial institutions. Risk limits, however, may be imposed on troubled institutions warranting heightened regulatory concern on a case-by-case basis.

The OTS formalized its philosophy that risk limits should be set by institutions themselves in 1989 with the issuance of Thrift Bulletin 13. The Bulletin allows the OTS to insist that limits be tightened, or, if the limits are not being observed, take corrective action.

The FED added that the market does discipline its participants, as counterparties reduce exposures to institutions regarded as taking excessive risks. Such market discipline encourages market participants to manage risk more effectively than would regulatory requirements, which might be viewed as providing a "safe harbor." Given the rapid pace of change in derivative markets, specific regulations regarding limits would quickly become outdated and, perhaps worse, would tend to stifle or discourage market innovations which add greatly to the competitiveness and profitability of U.S. banking organizations.

The CFTC stated that it believes that the views of the banking regulators should be given great weight on the issue of risk. However, the CFTC stated that its experience in futures market regulation may have some relevance. In the futures industry, three levels of credit policies and risk limits exist. First, private firms establish credit policies and risk limits as part of their ordinary business decisions. For example, futures commission merchants (FCMs) perform credit checks and establish risk (position) limits for their customers. Second, self-regulatory organizations (SROs), such as the exchanges, clearinghouses, and the National Futures Association, enforce capital requirements. Finally, the CFTC establishes and enforces its own set of capital rules. The CFTC stated that it was their understanding that the banking regulators' proposals on risk-based capital are intended to address and limit bank risk exposures.

8 b) In general, to what extent, and in what areas, do you think regulators should rely on internal controls versus regulatory requirements?

The regulators stated in general that procedures of risk management, qualified personnel, documentation, and oversight are best implemented by internal controls, with oversight and corrective action, if necessary, being handled by the regulators. Regulatory requirements, however, are needed to set capital standards, accounting requirements, and disclosure requirements. Any additional regulation would not be intended to replace competent management and appropriate systems for reducing operational risks.

The CFTC added that generally, with respect to those entities subject to their regulatory authority, regulatory requirements assume that adequate internal controls exist. For example, the securities and futures capital and reporting rules require, as an adjunct to required certified audits of financial condition of their regulated entities, a report on material inadequacies in the internal controls necessary to maintain adequate capital and required customer funds protections.

The regulators in general had concerns about imposing inflexible rules upon the financial derivative transactions. Review of policy and actual practice, with criticism as necessary, may be more effective and less burdensome than a predetermined set of regulatory requirements. The OCC stated that unnecessary regulation, depending on its form, has the potential to: (1) deprive U.S. institutions (both financial and otherwise) of an enhanced ability to manage risk; (2) restrict the flexibility of U.S. banks to be innovative and creative in developing risk management products that meet the constantly changing needs of their clients; (3) deprive U.S. banks of a significant and legitimate source of revenue; and (4) weaken the competitive position of U.S. banks vis-a-vis their foreign counterparts and other U.S. financial institutions.

The FED added that regarding capital, regulators need to assess the costs and benefits of dictating specific standards, for example, regarding market and interest rate risk. Consequently, when developing the structure of the recently issued interest rate risk proposal, the banking agencies sought to minimize reporting burden, to focus on institutions taking exceptionally high levels of risk and to permit, and in some cases require, the use of internal models in measuring exposures. This approach tries to balance the merits of providing specific minimum prudential standards with the difficulties and costs of associated with developing and administering them.

The SEC requires broker-dealers, under Rule 17a-5 of the Exchange Act, to undergo an annual audit by an independent accountant who reviews internal accounting controls. In addition, under the SEC's risk assessment recordkeeping and reporting requirements, broker-dealers are required to maintain and file with the SEC their risk management policies.

8 c) Do you feel that any of the "Recommendations for Dealers and End-Users" contained in the Group of Thirty report[29] (Recommendations 1-20) should be formally mandated by regulation? Please comment on the different issues addressed in the recommendations with specificity.[30]

In general, the regulatory agencies feel that Recommendations 1 through 20 contribute to a better understanding of sound risk management and accounting practices, and to the extent they are adopted by institutions, should help to strengthen the management and operating practices of individual institutions and the financial system as a whole. The regulators do not see a need to formally mandate any of the recommendations at this time, but instead feel the recommendations should be carefully considered by the regulatory agencies to bolster their relevant policy statements and examination procedures. The agencies feel that it is important, however, for them to provide supervisory guidance to institutions, clearly reflecting supervisory expectations with respect to the issues addressed in the recommendations where appropriate. In addition, the FDIC added that should these recommendations be codified by regulation, the general lack of originality and specificity in the Study may actually hinder effective supervision by encouraging adoption by the industry of minimal standards. The SEC added that the recommendations were not written with a view to establish a regulatory scheme for dealers and end-users.

The CFTC stated that a primary concern of regulators is that practices recommended in the Study, many of which (such as mark-to-market) are required of regulated entities subject to CFTC jurisdiction, are not universally followed. The CFTC noted that it would favor provisions by regulated entities which encourage non-regulated counterparties to use best internal control practices. The CFTC is cooperating with the SEC in the re-evaluation of relevant capital rule provisions which specifically addresses how best to treat credit risk in regulated entities.

According to the regulators, many of the concepts contained in the recommendations are already embodied in, and considered as, part of the regulatory process, and are utilized, or being considered, by institutions as part of sound management and internal control. The OCC has seen evidence that most, if not all, of the dealers of derivatives are conducting internal reviews to ascertain current and anticipated future compliance with the recommendations. Whether some of these recommendations should be reflected in some formal manner is one of many issues being considered by the regulatory agencies.

The FED, for example, stated that existing laws and regulations already provide the FED with sufficient authority to encourage banking organizations to adopt the

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[29] Group of Thirty, "Derivatives: Practices and Principles," Global Derivatives Study Group, Washington, D.C., July 1993.

[30] The FED commented specifically on recommendations 5 and 9. The OCC did not comment specifically on any of the recommendations. The FDIC commented specifically on all of the recommendations. The OTS commented specifically on all of the recommendations except for 2 through 8 which apply to dealers; no thrifts act as dealers. The SEC commented specifically on recommendations 2, 11, and 20. The CFTC did not comment specifically on any of the recommendations.

recommendations and to enforce the safe and sound operation of banks. Accordingly, the FED believes that, in general, the usefulness of incorporating these recommendations into formal regulations is small. For example, recommendations 9, 15, 16, and 17 are couched in necessarily subjective terms to apply only to those institutions to which the recommendations are relevant.

The agencies feel that as markets continue to develop and as further experience is gained by industry participants, it is likely that these recommendations will be further refined. Therefore, it is important that the regulatory framework not inadvertently inhibit the development of further refinements or practices that may be developed in response to changes in technology, products or markets. In addition, some recommendations may not apply fully to all institutions and, if embodied in regulations, could produce unintended results.

The OCC noted that the International Swaps and Derivatives Association (ISDA) has announced a series of conferences to educate market participants about the recommendations and to assist them in complying with the recommendations. ISDA has also announced that it will conduct a survey of market participants a year from now to determine how the market has responded to the challenges posed by the recommendations.

The regulators expressed some concerns with the following recommendations. Specific comments made by the regulators on these recommendations, both favorable and unfavorable, follow.

Recommendation 3: Market Valuation Methods

The FDIC stated that inasmuch as mid-market accounting provides a more accurate and conservative value, this is appropriate. However, the FDIC stated that even with the implicit adjustments of credit spread, these "marks" should not be used to substitute for, or reduce, required capital levels; especially if credit risk adjustments are not on an individual transaction or "derivative only" basis. "Portfolio" or "all customer activity" bases could result in smaller mark-to-market adjustments and possibly lower capital requirements.

In addition, the FDIC stated that while mark to mid-market approach may be generally appropriate for dealer banks, this same treatment may not be accurate for end-users. The latter, which include most state non-member banks, would not normally have access to the lowest possible replacement cost or best available sale price. This is particularly true of OTC instruments which have only limited liquidity in any event, and in some cases may only be unwound through the original dealer. The most accurate accounting treatment in these instances would be the least favorable (bid side) of the bid-ask spread.

Recommendation 4: Identifying Revenue Sources

The FDIC stated that while a useful analytical tool, this methodology tends to be complex and fraught with subjective interpretations. If this process is not performed in sufficient detail, the results may well be misleading at best, wrong at worst. As the principal risk analytic, this approach is probably neither meaningful or appropriate for state non-member banks.

Recommendation 5: Measuring Market Risk

The FED stated that it fully recognizes the importance of the concept of market risk measurement and its relevance for supervising and controlling market risks. It noted that this measure is already embodied in regulations proposed by the banking agencies involving capital standards for interest rate risk. Moreover, evaluation of a bank's estimates of earnings at risk is an important element in examiner's evaluation of trading activities. The FDIC added that this methodology is widely used for determining certain components of off-balance sheet risk.

While making calculation easier, the FDIC feels that this blending of risks may not reveal the existence of more severe individual risks. This recommendation does recognize that option portfolios are difficult to evaluate on a probability theory basis, and should instead utilize "more likely/less likely case" analysis.

Recommendation 10: Measuring Credit Exposure

The first part of the recommendation is a recitation of existing industry practice already fully accepted by the regulatory and accounting authorities.

The second part, recommending the use of probability analysis, is, according to the FDIC, useful and appropriate. However, the FDIC stated that the Study also seems to suggest that individual institutions could use this analytical approach to supplant the current standardized calculation for the future exposure component of the off-balance sheet capital charge. The statistical information and underlying assumptions used by individual institutions in probability models have been found to vary significantly, providing an uncertain framework for acceptable risk-based capital allocation. Existing regulatory capital requirements mandate the use of a standardized add-on risk-based capital component based on percentages of notional principal. The FDIC would object to the recommendation if its intended application results in attempts by individual institutions to unilaterally lessen the amount of required capital currently imposed on them by the standardized "add-ons".

The OTS agrees with this recommendation and already calculates both current and potential exposure. The OTS estimates potential exposure to IRR or potential reduction in exposure to IRR from derivative positions with the OTS model.

Recommendation 13: Master Agreements

The FED stated that although it strongly supports the increased use of master agreements, such agreements are not always best. Their value relative to specific counterparties should be determined on an individual basis, taking into account the enforceability of cross-product netting and other legal issues in the relevant jurisdictions. Although recent U.S. legislation helped substantially to remove uncertainties surrounding the treatment of netting agreements under U.S. law, considerable legal uncertainties remain for arrangements under foreign laws or with foreign counterparties, even if their offices are in the United States.

The FDIC stated that the broader use of master agreements is not considered objectionable, nor in theory is the adoption of cross product agreements. However, wider use of bilateral netting, if permitted by the agencies, does not imply the acceptability of full two-way payments. While included in the standard language of the ISDA Master Agreements, the concept of two way payments is not always consistent with existing bankruptcy and banking laws which provide for the repudiation of derivative contracts by the receiver under certain conditions. The FDIC is specifically permitted under FIRREA to selectively accept or repudiate "qualified financial contracts" (with certain constraints), including certain derivative instruments, in a failing bank resolution. The purpose of the Study recommendation is, according to the FDIC, clearly the more efficient conduct of derivative activities, but in the view of the FDIC, this relieves institutions from some of the responsibility for detailed individual credit analysis. The possibility that full two way payments could be interrupted by a bankruptcy or other severe default event injects a necessary element of market discipline into the system and adds an important layer of protection for the insurance fund.

The OTS concurs with this recommendation.

Recommendation 20: Disclosures

This is considered the area of the Study for which further regulatory guidance may well be suitable. FASB 105 covers a portion of these recommendations. Additional numerical data regarding the types and maturities of various derivative instruments would be valuable, according to the FDIC.

The FDIC noted that the disclosure of market risk is not specifically addressed in this recommendation, probably because it is very difficult to quantify. An understanding of management's attitude toward financial risks and how derivative instruments are being used in the context of this environment, according to the FDIC, is an acceptable proxy. Appropriate disclosure of market risk could also be gleaned from the interest rate risk position of the institution, adjusted for various stress test levels, and incorporated into existing interest rate risk reporting requirements.

Although not specifically mentioned in this recommendation or anywhere else in the Study, dealer disclosures as part of individual counterparty agreements should,

according to the FDIC, be significantly expanded and improved. Particularly with regard to the specific costs and risks of derivative instruments in varying interest rate or other market change scenarios. The FDIC recommends that such disclosures be made mandatory when dealers enter into transactions with non-registered broker-dealers. This would encompass the majority of less sophisticated end-users such as many smaller banks, thrifts, businesses, and retail customers.

The OTS stated that annual financial statements typically disclose accounting policies and analysis of any material positions in derivatives at the balance sheet date. Management discussion and analysis in Securities Act filings typically contain information about the risk profile of the institution and how management uses derivative instruments to control risk.

The SEC noted that the Study was unable to find an objective mechanism for disclosing market risk that was not unduly burdensome to market participants and was, therefore, unable to discuss how or to what extent market risk would be disclosed. However, the SEC feels that disclosure is an appropriate subject for regulation not only due to concerns regarding investor protection, but also in order to counter any tendency to minimize risks.

The regulators raised no particular objections to the following recommendations. Specific comments made by the regulators follow.

Recommendation 1: The Role of Senior Management

The FDIC stated that, more specifically, it would expect to see reflected in the Board minutes a full discussion of the costs, benefits, and the risks of an institution's planned or ongoing involvement in derivative activities, much the same way as for any new business venture. Risk parameters should be expressed in terms of most likely and worst case scenarios, with specific Board and management approvals for these levels clearly enumerated.

The OTS concurs with this recommendation. The OTS outlines the internal policies, practices and procedures that institutions should use to comply with regulations in interest rate risk in Thrift Bulletin 13.

Recommendation 2: Marking to Market

Existing accounting literature, memoranda, and examination practice requires this treatment for these uses of derivatives by financial institutions. However, at present, Call Report Instructions provide that all written standby contracts and other options arrangements shall be valued at a lower of cost or market (LOCOM), not mark-to-market.

Broker-dealers are required to mark their derivatives to market on a daily basis pursuant to the SEC's net capital rule.

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Recommendation 6: Stress Simulations

The FDIC fully concurs with this recommendation.

Recommendation 7: Investing and Funding Forecasts

The FDIC fully concurs and stated that a suitably detailed analysis of earnings and liquidity should reflect such forecasts, and is scrutinized under existing examination procedures and practices.

Recommendation 8: Independent Market Risk Management

The FDIC fully concurs and enforces this practice as part of its existing examination procedure.

Recommendation 9: Practices by End-Users

The FDIC concurs with this recommendation. The codicil, in addition to size and complexity, capital levels, management ability, and control environments, can vary significantly between institutions and can also mandate different uses of this and other guidelines.

The OTS also concurs with this recommendation. The OTS noted that Thrift Bulletin 13 advises thrifts to estimate the market value of their entire asset and liability portfolio as a means of measuring interest rate risk exposure and to set appropriate exposure limits. In addition, the OTS interest rate risk model estimates the market value of derivatives of thrifts that file Schedule CMR, and the OTS assesses the reasonableness of the assumptions used by thrifts to value their derivatives.

Recommendation 11: Aggregating Credit Exposure

The OTS concurs with this recommendation and stated that its loans-to-one borrower rule establishes a maximum credit exposure limit to one counterparty.

The SEC has not taken a position regarding the advisability of aggregating credit exposures. However, its Concept Release on the net capital rule requested comments regarding the extent to which netting of contracts with a single counterparty should be permitted.

Recommendation 12: Independent Credit Risk Management

This recommendation is largely a recitation of current industry practice. The OTS concurs and already directs thrifts to maintain the necessary internal controls needed to follow this recommendation.

Recommendation 14: Credit Enhancement

This is already an industry practice, with which the FDIC and OTS concur.

Recommendation 15: Promoting Enforceability

The FDIC stated that the complex international environment with regard to legal enforcement and business practice makes this recommendation extremely challenging. The OTS concurs with this recommendation.

Recommendation 16: Professional Expertise

The FDIC fully concurs for dealers. For end-users, the FDIC feels that senior management should, at minimum, posses sufficient expertise and technical knowledge to fully understand the specific activities undertaken by their institutions. In this context, senior management of these end-users may benefit more from increased disclosure of costs and risks as provided by dealers than from hiring additional in-house expertise or consultative "derivative professionals."

The OTS concurs with this recommendation.

Recommendation 17: Systems

The FDIC and OTS fully concur with this recommendation. The OTS stated that its policy directs thrifts to maintain risk management systems and controls for derivatives.

Recommendation 18: Authority

The FDIC and OTS fully concur with this recommendation. The OTS stated that it already directs, in Thrift Bulletin 13, that specific individuals be authorized to conduct derivative transactions, and that the transactions be monitored. OTS regulations for futures and options require the Board of Directors to authorize any trading in those derivatives and to establish internal controls on the use of those derivatives.

Recommendation 19: Accounting Practices

The FDIC agrees that this recommendation is desireable, although it stated that this goal appears far from realization at this time.

The FDIC further explained that recommendations for harmonization of accounting standards include dealer and trading portfolio mark-to-market accounting, and end-user reflection of deferral accounting for risk management. This represents no change from current policy and practice. Relevant accounting guidance is embodied in FASB 80 and EITF 84-7 and 84-3.

Although the FDIC concurs that dealers should generally be accorded mark-to-market treatment, written option contracts, including those by dealers, are on a LOCOM rather than market basis for Call Report purposes. The agencies would need to consider whether to change to market value for dealer written options for Call Report purposes. For Call Report treatment, futures, forwards, and written options must either be marked-to-market or LOCOM. Interest rate swaps are in most instances permitted deferral accounting treatment. The banking agencies have long had concerns about the deferral of losses on future, forwards, and written options, especially long-term deferrals. As permitted by Section 121 of FDICIA, the agencies have continued to require reporting of losses on a cash basis. The FASB is still working on developing consistent and specific accounting standards for hedging activities, but it may still be some time before these are adopted. Finally, Call Report instructions prohibit netting except where specifically permitted. The FDIC has not taken exception to the practice of reporting net cash flows under derivative contracts such as interest rate swaps.

The OTS concurs with this recommendation and stated that this recommendation is consistent with existing GAAP accounting required by OTS. The OTS summarized the GAAP policy for swaps, futures, and options. In general, swaps and futures can qualify for hedge accounting, and when they are not used for hedging, they must be marked-to-market. Likewise, purchased options that are matched with balance sheet items are subject to hedge accounting, and are otherwise marked-to-market. Written put options and written call options do not qualify for hedge accounting.

Question #9

Please comment on the four "Recommendations for Legislators, Regulators, and Supervisors" contained in the July 1993 Group of Thirty report[31] (Recommendations 21-24) as they are relevant to your agency. Please comment on each recommendation separately.

The regulators generally concur with the four recommendations and discussed the steps being taken that are consistent with the recommendations.

Recommendation 21: Recognizing Netting - Regulators and supervisors should recognize the benefits of netting arrangements where and to the full extent that they are enforceable, and encourage their use by reflecting these arrangements in capital adequacy standards. Specifically, they should promptly implement the recognition of the effectiveness of bilateral close-out netting in bank capital regulations.

The regulators stated that this recommendation is consistent with the April 1993 recommendation of the Basle Committee on Banking Supervision.[32] The banking agencies are currently developing proposals to amend their risk-based capital guidelines to conform to the Basle Committee recommendations. The OTS is considering joining this rulemaking. The agencies are working to create modifications to the risk-based capital requirements with the intent of recommending recognition of bilateral netting in forms other than novation, where the contracts are deemed to be legally enforceable.

The FDIC stated that Recommendation 21 as currently stands would have the effect of significantly reducing the amount of regulatory capital without a clear, commensurate decrease in credit risk, unless the legal uncertainties regarding netting have been clarified. With regard to multilateral netting arrangements, the banking agencies and international regulatory authorities have not reached the point where changing the risk-based capital guidelines to recognize multilateral netting is considered to be appropriate. This is in large part due to insufficient data supporting the operational and legal elements of these types of arrangements. While, according to the FDIC, the concept appears to be theoretically sound, a successful track record in the exercise of these arrangements is necessary to validate consideration for a change in the existing capital standards.

The OCC stated that it believes that properly structured netting arrangements have substantial benefits not only for the parties to such arrangements, but to the financial system as a whole. Such benefits include the reduction in counterparty

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[31] Group of Thirty, "Derivatives: Practices and Principles," Global Derivatives Study Group, Washington, D.C., July 1993.

[32] In a consultative proposal entitled "The Prudential Supervision of Netting, Market Risk, and Interest Rate Risk," the Basle Committee recommended that bank supervisors recognize bilateral close-out netting, in addition to netting by novation, for the purpose of calculating risk-based capital. The Basle Committee recommendation would require a bank to satisfy its supervisor that (1) its netting contract provides for netting of unrealized gains and losses in the event of the counterparty's default, (2) it has obtained written and reasoned legal opinions that such netting would be upheld in relevant jurisdictions, and (3) it has procedures in place to ensure that its netting arrangements are kept under review in light of changes in relevant laws.

credit risk, the ability to increase profitable businesses within existing credit limits, and the reduction of settlement risk within the financial system as a result of the reduced volume and amounts of payments over large-dollar wire transfer systems. The OCC strongly encourages the use by national banks of legally enforceable netting arrangements with respect to their financial derivative transactions. The OCC anticipates issuing a notice of proposed rulemaking on the Basle proposal on netting by the end of 1993. The SEC believes that netting arrangements have the effect of reducing the overall credit risk exposure in derivative products, but has no effect on the market risk element of derivative risk. The SEC's Concept Release on the net capital rule solicited comment on netting.

In order to broaden the individual and systemic benefits to be achieved by netting arrangements, the OCC recently supported the FED's proposal to expand the definition of the term "financial institution" in FDICIA to include affiliates of otherwise regulated entities. Sections 401-407 of FDICIA provide for the enforceability of "netting contracts" (as the term is defined therein) by "financial institutions".

Settlement risks can also be reduced by properly designed payment netting arrangements. Such netting, according to the CFTC, can be accomplished through a clearinghouse.[33] No clearinghouse arrangement currently exists for OTS derivative transactions, although such proposals have been discussed. The CFTC believes that OTC clearing arrangements should be further discussed. Separately, the CFTC currently has before it certain exemptive petitions relating to reduction of regulatory requirements for certain transactions between specified categories of participants effected and cleared through the facilities of an exchange.[34]

Recommendation 22: Legal and Regulatory Uncertainties - Legislators, regulators, and supervisors, including central banks, should work in concert with dealers and end-users to identify and remove any remaining legal and regulatory uncertainties with respect to:

- *The form of documentation required to create legally enforceable agreements (statute of frauds).*
- *The capacity of parties, such as governmental entities, insurance companies, pension funds, and building societies, to enter into transactions (ultra vires).*
- *The enforceability of bilateral close-out netting and collateral arrangements in bankruptcy.*

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[33] A clearinghouse reduces system flows because each clearing member makes only a single payment representing its net proprietary obligation and net customer obligations to all other clearing members.

[34] These petitions may raise regulatory issues relevant to the clearing of non-conventional exchange products.

- *The enforceability of multibranch netting arrangements in bankruptcy.*

- *The legality/enforceability of derivative transactions.*

The federal regulatory agencies have sought to identify issues that raise concerns regarding systemic risk and the stability of regulated institutions and the financial markets, and have proposed or supported legislative or regulatory measures needed to address such issues. Such issues have included those relating to the enforceability of netting contracts and to the legality of OTC derivatives under the Commodity Exchange Act. The agencies expect to continue to examine the issues and, where appropriate, propose legislative or regulatory measures to address systemic risk and related concerns. The OCC noted, however, that much of the work with respect to these issues must be undertaken by legislators, non-bank U.S. supervisors and regulators, and foreign financial institutions supervisors an regulators.

The CFTC has acted to clarify the legal status of swaps, hybrids and certain energy contracts.

The SEC explained that there is legal uncertainty regarding the type of writing required for the purchase and sale of OTC derivative transactions due to conflicts between the statue of frauds requirements in New York's Uniform Commercial Code and the New York General Obligations Law. While it is important that these uncertainties be resolved, it also should be noted that such uncertainties are not unique to New York and regulators should support efforts to promote uniformity in the commercial law area.[35]

The SEC stated that the experience with the default of the Drexel Burnham Lambert conglomerate and other market participants suggests that there is a need for greater certainty and coordination in the area of bilateral close-out netting, multibranch netting, and collateral arrangements in bankruptcy.

A number of other legal issues, however, such as the powers of municipalities and insurance companies to engage in derivative transactions, are state law matters in which the imposition of a federal standard may not, according to the FED, be justified. The FED stated that such issues should be addressed by affected dealers and end-users at the appropriate level of government, with participants restricting their activities appropriately until such uncertainty is resolved.

Recommendation 23: Tax Treatment - Legislators and tax authorities are encouraged to review, and, where appropriate, amend tax laws and regulations that disadvantage the use of derivatives in risk management strategies. Tax impediments include the inconsistent or uncertain tax treatment of gains and losses on the derivatives,

[35] One such effort is the Conference of Commissioners on Uniform State Laws' ongoing efforts to revise Articles 8 and 9 of Uniform Commercial Code as they related to the creation, perfection, transfer, and pledge of security interests in securities. In addition, in pursing its mandate to identify impediments to the prompt and accurate clearance and settlement of securities transactions, the Commission's Market Transactions Advisory Committee continues to address ways to promote commercial law uniformity.

in comparison with the gains and losses that arise from the risks being managed.

The FED explained that under the tax code, capital gains or losses arise from the sale or exchange of property which is a capital asset. In 1988, the Supreme Court in Arkansas Best advanced a literalist interpretation of the definition of capital asset, thereby narrowing the exceptions to that definition so that may transactions in derivatives would be viewed as giving rise to capital gains or losses rather than ordinary income. This decision created significant concern and uncertainty in the financial markets over the tax treatment of hedging transactions. Prior to that case, taxpayers had assumed, underlying in part on a earlier Supreme Court case, Corn Products, that financial instruments used to hedge business risks would receive ordinary tax treatment if they had been purchased for a business purpose, while Arkansas Best seemed to suggest that many hedging transactions would give rise to capital losses that could not be offset against ordinary income. In other words, a taxpayer could be liable for taxes on a transaction that generates no net income. The CFTC has supported addressing the uncertainty engendered by the IRS's interpretation of the Arkansas Best case.

The recent Tax Court decision in FNMA v. Commissioner has provided some comfort to the financial markets by interpreting Arkansas Best to permit the statutory exceptions to the definition of capital asset to be construed liberally. The Tax Court further concluded that even property that does not fall within any of the statutory exceptions should receive ordinary tax treatment if it is "integrally related" to the underlying property which is excluded.

The decision in FNMA has not resolved all of the uncertainty, however, and legislative or administrative action may be appropriate. Absent such action, for instruments or transactions about which the tax law is unclear, taxpayers are in the position of taking a gamble as to the ultimate tax treatment. Further, where ordinary income treatment is not available, the benefits of hedging as a risk-reducing tool are decreased.

Recommendation 24: Accounting Standards - Accounting standards-setting bodies in each country should, as a matter of priority, provide comprehensive guidance on accounting and reporting of transactions in financial instruments, including derivatives, and should work towards international harmonization of standards on this subject. Also, the International Accounting Standards Committee should finalize its accounting standard on Financial Instruments.

The FED agrees that reaching an international accord on accounting standards for derivative instruments is desireable. However, the FED believes that the International Accounting Standards Committee (IASC) should work closely with the bank supervisory agencies of those nations with significant derivative markets in setting uniform accounting rules to ensure that supervisory concerns about derivatives are fully considered by the IASC and adequately addressed in any final IASC rules. The OTS stated that this recommendation must be accomplished by FASB rather than

be regulation. The CFTC has identified in its Study[36] accounting standards for disclosure of derivative risk as an area for coordinated regulatory attention.

The OCC is concerned that national banks may be affected by inconsistent derivative accounting standards when evaluating the off-balance sheet exposures of counterparties to financial derivative transactions. The OCC also stated that U.S. banks may suffer from a lack of a level playing field. The OTS similarly stated that the marketplace keeps developing new financial instruments and derivatives, making it difficult for any accounting standards to keep current. The OCC has always encouraged standardized reporting of financial derivative transactions.

Currently, the American Institute of Certified Public Accountants (AICPA) Stockbrokerage and Investment Banking Committee is in the process of revisiting the Audit and Accounting Guide for Brokers and Dealers in Securities. The SEC stated that it may be appropriate, however, to ask AICPA to augment the guide with more specific guidance on internal controls over derivatives, especially with respect to managing market and credit risks.

In May 1986, the FASB added a project on accounting for financial instruments to its agenda. Several resulting memoranda and statements have particular relevance to derivative securities, namely Statement No. 105 (March 1990), and Statement No. 107 (December 1991). These statements require disclosure of credit risk and fair value of financial instruments.[37]

In September 1991, FASB issued a research report regarding hedge accounting which includes consideration of the use of derivative instruments for hedging. In June 1993, FASB issued another report to provide background information for meetings held in September 1993 to discuss hedging issues. FASB subsequently issued a survey questionnaire to participants at the meeting.[38]

IASC currently has outstanding an exposure draft that comprehensively addresses accounting and disclosure standards for financial instruments, to which the SEC has offered comments.

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[36] See The Report of the Commodity Futures Trading Commission, "OTC Derivative Markets and Their Regulation," CFTC, Washington, DC, October 1993.

[37] Statement 105 is entitled Disclosure of Information about Financial Instruments with Off-Balance Sheet Risk and Financial Instruments with Concentrations of Credit Risk. Statement 107 is entitled Disclosures about Fair Value of Financial Instruments.

[38] The September 1991 report is entitled "Hedge Accounting: An Exploratory Study of the Underlying Issues". The June 1993 report is entitled "A Report on Deliberations, Including Tentative Conclusions on Certain Issues, Related to Accounting for Hedging and Other Risk-Adjusting Activities".

Question #10

If the July 1993 Group of Thirty "Recommendations for Dealers and End Users" (Recommendations 1-20) are not implemented by regulation, are there adequate mechanisms in place to ensure that such recommendations will be self-implemented? Concern has arisen regarding whether or not one can depend solely on the forces of managerial responsibility and market discipline as sufficient incentives to motivate firms to incur the implementation costs of the recommendations. Does your agency believe that mechanisms, such as periodic surveys of industry practice, a timetable for implementation, or a monitor of such actions are warranted?

In general, the regulators felt that since many of the recommendations contained in the Group of Thirty Study relate to the adequacy of internal control mechanisms, management control, measurement of risk, and other safety and soundness issues, such recommendations are addressed in the current supervisory and examination process. Regulators have seen evidence that market participants are currently assessing their compliance with the recommendations, and, with the encouragement from the regulators, will work toward implementing the recommendations where appropriate. Regulators generally plan to encourage self-implementation of the recommendations through the examination process. Regulators stated that many market participants, as both dealers and end-users, are already following or implementing the recommendations where appropriate. The OCC stated that when reinforced by a more knowledgeable group of examiners and a strengthened examination process, such guidance should result in the types of procedures, systems, management and oversight appropriate and necessary to effectively engage in, and manage the risks associated with, derivative transactions. The FED added that certain current and proposed requirements dealing with derivatives, in many cases, go beyond those recommended in the Study.

The FED stated that it would be desirable for major market participants, both dealers and end-users, to adopt practices that are generally consistent with most of the recommendations. Toward that end, the FED would welcome further private sector initiatives designed to facilitate implementation of many of the recommendations. The FED would expect and encourage further follow-up efforts by the Group of Thirty, as the Group of Thirty has been effective in the past in implementing its previous recommendations in other areas.

For their part, the banking industry, financial analysts, and accounting professionals, can do, and are doing, much to ensure the adoption of key recommendations. In addition, the Bank for International Settlements (BIS) can be expected to provide incentives to institutions to adopt certain recommendations, such as the adoption of bilateral close-out netting and the use of value-at-risk measures.

Of greater concern to the FDIC is that the industry will rush to embrace two portions of the Study not acceptable to the FDIC, namely: (1) the use of probability analyses by individual banks to measure their own market risk and by inference

capital requirements, on a bank-by-bank basis, in place of the existing standardized "add-on" approach; and (2) the application of unlimited two-way payments to determine credit exposure levels as part of a broader definition of bilateral netting.

The CFTC stated that the Group of Thirty could itself establish a timetable for adoption of these recommendations and monitor and report on the degree of compliance, steps which it has undertaken in the case of its recommendations for improved settlement procedures in the global securities markets. The CFTC supports including internal controls on the agenda of the interagency coordinating council recommended in its OTC derivatives report.[39]

The OCC noted that the International Swap and Derivatives Association (ISDA) has announced a series of conferences to educate market participants about the recommendations and to assist them in complying with the recommendations. ISDA has also announced that it will conduct a survey of market participants a year from now to determine how the market has responded to the challenges posed by the recommendations.

[39] See the Report of the Commodity Futures Trading Commission, "OTC Derivative Markets and Their Regulation," CFTC, Washington, DC, October 1993. The study was released on October 25, 1993.

Question #11

Please comment on whether institutions should be required to establish separately-capitalized subsidiaries to conduct derivative activities.

Generally, the bank regulators see little merit in requiring derivative activities be conducted in separately capitalized subsidiaries. The risks involved in derivative activities are similar to risks that banks manage on a daily basis. Derivatives have been a consistent source of profitability for the banking industry. Forcing these activities into a subsidiary would increase the cost to banks and prevent certain banks, particularly small, end-user banks from engaging in derivative activities that may enable them to more effectively manage risk.

The FDIC points out that for sound, well capitalized institutions there is little need for the establishment of a subsidiary. Such a well-managed, well capitalized institution already is rewarded in the marketplace with a higher credit rating and lower possible transaction costs with prospective counterparties. Alternatively, for weaker institutions who would most benefit from a subsidiary requirement, the allocation of capital away from supporting deposit liabilities into a subsidiary may be problematic from a supervisory perspective.

The FED indicates that requiring separate subsidiaries might hamper the global competitiveness of U.S. banking organizations. One of the goals of the Basle Accord was to create an international level playing field. Promulgating a subsidiary requirement for U.S. banks could undermine U.S. banks in the international market and undermine their long term profitability.

The SEC has indicated that many securities firms conduct OTC derivative activities in unregistered broker-dealer affiliates. Activities may be conducted in an affiliate if they do not constitute securities trading. Three firms have set up separately capitalized, AAA-rated derivative product companies (DPCs) to take advantage of the market opportunities associated with a high credit rating. Securities firms generally conduct derivative activities in affiliates to avoid the conservative treatment of credit risk required by the net capital rule for broker-dealers.

The CFTC indicates that legal questions may exist regarding the separateness of a DPC in an insolvency situation.

Question #12

12 a) Do you believe the netting provisions contained in the Bankruptcy Code, FIRREA, and FDICIA should be conformed to a single standard? Do the netting provisions in these statutes adequately cover all situations? If not, what situations do and don't they cover?

The banking agencies agree that the legal standards for netting under the Bankruptcy Code, FIRREA, and FDICIA should be conformed. Uniform standards would provide greater certainty to the market.

Differences in coverage by FDICIA, FIRREA and the Bankruptcy Code appear to have created legal uncertainty. The legal uncertainty appears to emanate mainly from the definitional sections of FIRREA and the Bankruptcy Code.

FDICIA contains the broadest provisions validating both bilateral and multilateral netting in the events of default. "Financial institutions" covered by the FDICIA provisions include depository institutions, securities brokers or dealers, futures commission merchants, or other institutions determined by the Federal Reserve Board of Governors. The FDICIA netting provisions apply to all valid netting contracts between covered parties, notwithstanding any other provision of law. FDICIA expressly avoids defining specific types of financial contracts for inclusion under its netting provisions.

While the FDICIA netting provisions have broad scope and cover, without limitation, all types of financial contracts subject to netting, both FIRREA and the Bankruptcy Code expressly enumerate the types of contracts that may be netted. Under FIRREA, a contract may be netted if the contract is defined as a "qualified financial contract" (QFC). FIRREA established the enforceability of the netting provisions of master agreements with respect to QFCs entered into by failed financial institutions. As defined, a QFC means any securities contract, commodity contract, forward contract, repurchase agreement, swap agreement, or similar agreement as determined by the FDIC. [12 U.S.C. § 1821(e)(8)]

In comparison, the 1990 amendments to the Bankruptcy Code permit exceptions to the automatic stay provisions for certain types of financial contracts that fall under the Code's definition of "swap agreements." Further coverage for netting purposes may occur under the Code's definitions of "forward contracts" or "securities contracts." In addition to the automatic stay provisions, the Code imposes substantive conditions on setoffs of obligations other than swap agreements that are not imposed by FIRREA or FDICIA. Under the Code's definition of "swap agreement," twelve specific types of financial contracts are enumerated with a general provision that includes coverage of "any other similar agreement."

Great legal uncertainty exists under the Code and FIRREA where netting is limited only to specific types of contracts that are expressly enumerated. Describing the definitional problems, the FDIC explains that under the Code "if a derivative

product satisfies the definition of swap agreement on all sides of the netting transaction, the netting can proceed without regard to either the automatic stay, the trustee's avoidance powers, or the risk of selective repudiation of contracts. On the other hand, if a derivative product does not fit the Code's definition of a swap agreement, such as equity derivatives, bond options, spot foreign exchange agreements or possible instruments not in existence, there will be substantial legal uncertainty and delay in at least four situations involving a bankruptcy debtor who has a net obligation or net entitlement." The FDIC then lists four examples as follows:

- If a derivative product does not fit within the Bankruptcy Code's definition of "swap agreement" the automatic stay will delay the netting transaction.

- If the parties to a derivative transaction seek to net a swap agreement across product types, it is unclear whether the exception to the automatic stay applies to the netting provision of the document.

- If a party seeks to net across product types, there is also uncertainty as to whether the master agreements should be treated as one single executory contract which can be immediately terminated. If the agreements are treated as separate contracts there is a chance of selective repudiation.

- If a derivative product does not come under the definition of "swap agreement," there is risk that the transaction would not be protected from the trustee in bankruptcy's avoidance powers.

The OCC provides that: "Similarly, under FIRREA, a dealer may face the risk of selective repudiation among several qualified financial contracts, if it does not persuade a receiver or conservator that all transactions under a master agreement are 'swap agreements.' This risk may be diminished, however, if the master agreement contains a provision that provides a basis for terminating all transactions under the master agreement if there is an attempt to repudiate any of the transactions documented thereunder."

The FDIC and the OCC appear to advocate conforming the Bankruptcy Code and FIRREA to be consistent with FDICIA by not tying the validation of netting agreements to any specific type of transaction. This would be consistent with each of the bank regulators favorable view on a uniform standard.

In addition, the FED indicates that under both the Bankruptcy Code and FIRREA it is unclear whether federal funds transactions or spot contracts would be covered. Presumably, any legislation should clarify this point.

Separately, the FDIC commented that its experience in the Bank of New England (BNE) case under the FIRREA provisions concerning QFCs occurred without any problems. All derivative contracts at BNE were considered QFCs and were transferred to a bridge bank. The effect of this transfer was to have the FDIC temporarily step in as a counterparty in place of the failed institution. Based on its BNE experience, the FDIC would recommend increasing the recordkeeping

responsibility of individual banks so that data could be compiled in a more efficient manner. Alternatively, the FDIC would advocate expanding the 24 hour notification period under FIRREA during which the FDIC must evaluate a failed institution's derivative portfolio to determine which contracts are QFCs and assign a value. This would reduce the FDIC's potential for error.

Finally, the CFTC indicates concern that the provisions of FIRREA and FDICIA do not contravene the existing priorities for the disposition of property of regulated futures brokers under the Bankruptcy Code and the CEA.

12 b) How was the resolution of derivative contracts handled in the failure of the Bank of New England?[40] How effective were the current legal mechanisms in resolving the contracts? (FDIC)

According to the FDIC, all derivative contracts in the BNE case met the legal definition of "qualified financial contracts" and were transferred to the bridge banks that were formed to absorb certain assets, liabilities and off-balance sheet obligations of the failed bank and its subsidiaries. The effect of this transfer was to have the FDIC temporarily step in as counterparty in place of the failed institution. Generally, this process of timely notification and other requirements of the FDI Act was, according to the FDIC, carried out without any problems. Based on its BNE experience, the FDIC would recommend increasing the recordkeeping responsibility of individual banks so that data could be compiled in a more efficient manner.

[40] On January 6, 1991, federal regulators seized the Bank of New England (BNE) and its subsidiaries. BNE, with $22 billion in assets, was the country's 33rd largest banking company. According to regulators, BNE's troubles were caused primarily by its aggressive real estate lending in a local economy that subsequently declined. At the time it failed, BNE was the counterparty in a number of derivative contracts. According to industry sources, the contracts were unwound, or settled, "smoothly" with the cooperation of the other counterparties involved. No significant losses, if any, were incurred by any party.

12 b) Please discuss the resolution of derivative contracts in the failure of Drexel Burnham Lambert. How effective were the current legal mechanisms, such as the Bankruptcy Code, in resolving the contracts? (SEC and CFTC)

Drexel Burnham Lambert Group Inc. (DBL Group), and its swap subsidiary, DBL Products, went bankrupt in 1990 at which time they were the counterparty in a number of derivative contracts. According to industry participants and regulators involved, the contracts were unwound, or settled, "smoothly" with the cooperation of the other counterparties involved. The unwinding process was accomplished without apparent adverse effects on domestic and foreign financial markets, and no taxpayer money was lost.

Because DBL Group filed for bankruptcy, most counterparties to DBL Product's swap transactions were not, under the terms of the swap agreements, obligated to pay the money they owed since DBL Products technically defaulted on the swaps. However, virtually all counterparties paid Drexel the money they owed for various reasons described below. Many counterparties had unwound their contracts with Drexel upon anticipation of the failure. When Drexel began having financial difficulties in February 1990, the SEC, the CFTC, the Federal Reserve Bank of New York, and the National Association of Securities Dealers (NASD) oversaw the unwinding of the activities of Drexel, including the derivative activities. To the extent that derivative activities were conducted in Drexel's registered broker-dealer, the SEC was able to wind down these contracts in an orderly manner, without any cost to U.S. taxpayers. The agencies did not, however, closely monitor Drexel's unwinding of its swap agreements, as the swaps were in an unregistered affiliate. According to industry participants involved, however, the various financial markets were generally unaffected by Drexel's unwinding activities.

The failure of Drexel was a stimulus behind the passage of the Market Reform Act of 1990[41] which gave the SEC the ability to monitor the activities of broker-dealer unregistered affiliates under rules implementing a risk assessment program. In addition, the bankruptcy case of DBL Products was initiated prior to the June 25, 1990 effective date of amendments to the Bankruptcy Code concerning the treatment of swap transactions.

DBL Group conducted its swap trading activities though DBL Products. DBL Products was engaged in the business of providing interest rate risk management strategies and acted as principal in interest rate swap transactions. Virtually all swap contracts entered into by DBL Products designated its parent, DBL Group, as guarantor of DBL Products performance under the contract. The contracts provided further that the guarantor's filing for bankruptcy constituted a default by DBL Products, giving rise to termination rights of DBL Products' counterparties.

The DBL Group Board of Directors filed for Chapter 11 for DBL Group on February 13, 1990. DBL Products, however, and two other Drexel subsidiaries

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[41] P.L. 101-432.

decided not to commence bankruptcy proceedings at that time, and instead DBL Group publicly announced its intention to cause its subsidiaries to wind-down their respective operations in order to maximize the value of their respective assets and minimize respective liabilities. On February 13, 1990 DBL Products had a swap book with customers consisting mostly of savings and loan institutions as well as other dealers and corporate end-users. Many of these savings and loans had low credit ratings and were required to post collateral under their swap agreements.

Virtually all of DBL Product's swap agreements reportedly included a limited two-way payments clause ("walk-away clause), which permitted the non-defaulting party to walk away from its obligations. DBL Group's bankruptcy filing placed DBL Products in default and gave most of its non-defaulting counterparties the right to rely on the contract's walk-away clause and not pay DBL Products the money owed to it. Over 70% of DBL Product's counterparties owed DBL Products money. Nevertheless, only a handful of DBL Product's counterparties took advantage of the walk-away clause and instead paid DBL Products the money owed to it. According to the CFTC, this was due to a number of factors.

First, although DBL Products was technically in default under its swap contracts, it was not yet in bankruptcy, and thus remained free to aggressively negotiate settlements with its counterparties without the limitations of the automatic stay. This Drexel did with great success. Second, as to the 70% of the counterparties who owed DBL Products money under swap contracts (counterparties who were "out-of-the-money"), DBL Products reportedly threatened to challenge their right to "walk-away" through litigation. Unresolved questions about the enforceability of the walk-away clause and the prospect of lengthy and expensive litigation were powerful incentives for counterparties to negotiate with DBL Products. Third, in addition to these concerns, many DBL Products' counterparties also entered swap transactions with other "big players" in the OTC swap markets and feared that these institutions would be less likely to do business with them in the future if they sought to take advantage of their walk-away clause with Drexel. DBL Products recovered 100 cents on the dollar from most counterparties owing DBL Products money under their contracts.

DBL Products also reportedly threatened counterparties that were owed money by DBL Products (counterparties who were "in-the-money") with the prospect that the DBL Products might file for bankruptcy protection. Such a filing might have significantly delayed recovery by those counterparties and have resulted in smaller payouts than were then being offered by DBL Products. DBL Products paid to such counterparties approximately 70-75% of the agreement value of the contracts.

DBL Products' traders were able to dispose of 90% of the firm's swaps portfolio within two months after the unwind process had begun, without apparent adverse effects on the financial markets.

12 c) How did the withdrawal of certain uncommitted credit lines and other funding difficulties in 1991 for Salomon Brothers resulting from the Government Securities issue effect their ability to meet their derivative obligations?[42] (SEC and CFTC)

According to the SEC, despite its Treasury auction violations and the related investigation and penalties, Salomon was able to meet all of its existing obligations to customers and creditors, including those involving derivative products. After disclosure of its Treasury auction violations, however, the number of new interest rate swaps into which Salomon entered declined. This may have been a result of counterparties' reluctance to do business with a firm whose long-term prospects at that time had been called into question. Nevertheless, according to the SEC, it does not seem that Salomon's ability to satisfy its ongoing obligations was adversely affected by its involvement in the Treasury auction issue.

The Treasury auction issue did not result in any CFTC action against Salomon for violations of CFTC regulations governing futures trading. Salomon's compliance with financial requirements, such as segregation of customer funds and maintenance of adequate net capital, was monitored by its designated self-regulatory organization (DSRO). The CFTC in turn was in frequent contact with the DSRO on the situation. The DSRO also did not report that Salomon Brothers was unable to comply with CFTC financial requirements at any time during that period.

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[42] In 1991, Salomon Brothers reportedly faced the withdrawal of certain uncommitted credit lines and, for a period of time, certain funding difficulties resulting from the Treasury auction issue. On August 9, 1991, Salomon Brothers, Inc. announced that it had reported to the appropriate government agencies the discovery of violations of law and other irregularities in certain bids that it had submitted in several auctions of U.S. government securities during the previous year. On May 20, 1992, Salomon settled the Treasury auction investigation by paying a $290 million fine, agreeing to an SEC injunction and administrative order, and being suspended from trading activity with the Federal Reserve Bank for two years. Other investment banks were also fined on similar charges. At that time, Salomon was the counterparty in a number of derivative contracts.

Question #13

Recommendations contained in the July 1993 Group of Thirty Report (Recommendation 20) and elsewhere state that until harmonized accounting and disclosure standards are set, certain disclosures should be made by dealers and end-users. Although a disclosure regarding credit risk is recommended, a similar disclosure for market risk is not mentioned. Should a summary measure of market-risk exposure be disclosed? If so, what form should such a measure take?

G-30 Study Recommendation 20 on Disclosures provides:

Financial statements of dealers and end-users should contain sufficient information about their use of derivatives to provide an understanding of the purposes for which transactions are undertaken, the extent of transactions, the degree of risk involved, and how the transactions have been accounted for. Pending the adoption of harmonized accounting standards, the following disclosures are recommended:

- *Information about management's attitude to financial risks, how instruments are used, and how risks are monitored and controlled.*
- *Accounting policies.*
- *Analysis of positions at the balance sheet date.*
- *Analysis of the credit risk inherent in those positions.*
- *For dealers only, additional information about the extent of their activities in financial instruments.*

a) FDIC

The FDIC believes that the areas of disclosure discussed in the G-30 Study are appropriate for published financial reporting purposes. While such disclosures may be appropriate for dealers, the FDIC does not believe that enough disclosure exists by dealers to unsophisticated end-users. FDIC is particularly worried about small unsophisticated state non-member banks that may be end-users of derivatives. The absence of disclosures provides significant examination problems when these instruments are encountered at FDIC regulated banks. This could lead to hidden risks as these products are introduced to the retail customers of insured institutions. The FDIC finds it notable that the G-30 Study fails to address the issue of disclosure to end-users. The FDIC believes that increased disclosures to end-users represents a significant departure from current industry practice and would require substantial implementation costs. It believes that such detailed disclosures may be significantly

more useful than the general summary of market risk narrative suggested by the G-30.

b) OCC

The OCC strongly supports G-30 Recommendation 20. The OCC is particularly interested in the possibility of the disclosure of a "loan equivalency measure" as part of the analysis of credit risk described in Recommendation 20. The loan equivalency measure determines the equivalent on-balance sheet exposure for an off-balance sheet risk created by a derivative transaction. The loan equivalency amount considers both credit and market risk. The OCC is also reviewing the disclosure of the market value of out-of-the-money contracts to supplement replacement cost information about market risk.

c) FED

The FED expresses concern about competitive sensitivities and the reporting burden that disclosures may entail. Methods for reporting meaningful assessments of "value at risk" need to be fully explored. The FED believes that the "value at risk concept discussed in the G-30 study needs to be more fully explored but is not prepared to make a final determination on the issue. The FED appears to be unsure whether a summary measure for market risk for supervisory purposes is appropriate for disclosure purposes. The summary measure for supervisory purposes may have shortcomings due to regulatory burden. Permitting institutions to use their internal models for risk measurement is one way that the regulators are trying to reduce the burden. Although waiting for comment on the disclosure of market risk measures, the FED encourages institutions to disclose both qualitative and quantitative measures of market risk. "Generally such disclosures should address exposures to a number of both rising and declining rate environments in order to convey the asymmetries in the sensitivity of their on- and off- balance sheet positions. Disclosures should also discuss the nature of stress tests used to measure exposure." The FED indicates that further disclosures related to derivatives and market risk may be adopted pursuant to the FDICIA audit provisions.

d) OTS

The OTS agrees with Recommendation 20 but does not believe it should be implemented by new regulations. Management discussion and analysis in Securities Act filings contain adequate information regarding derivatives.

e) SEC

The SEC requires extensive disclosures related to derivatives that go beyond GAAP standards. Generally, GAAP does not require disclosure of a market risk factor, although certain portion of market risk may be accounted for in disclosing the

fair market value of derivatives. Under Regulations S-X the SEC requires disclosures that do take into account market risks related to interest rates and maturity dates of long-term instruments. Pursuant to Regulation S-X the SEC requires disclosures that are reasonably expected to have a material impact on future income. This presumably may include information on market risk.

The SEC indicated that the safety and soundness objectives of risk-based capital make a single measure of market risk available. However, it is unclear whether such a number would be of significant benefit to investors.

f) CFTC

The CFTC has extensive rules for disclosure of market risks to customers. General issues of accounting and disclosure should be taken up by the regulators on a coordinated basis.

Question #14

Please comment on the notion of establishing a clearinghouse offset mechanism for swaps transactions. How would a clearinghouse offset separately affect dealers and end-users? Would either benefit more than the other?

There appears to be a prevailing consensus among regulators[43] that while clearinghouse arrangements have some merits, they should not be implemented in the swaps markets at this time.[44] Regulators qualified this general conclusion by saying that a properly designed and properly implemented clearinghouse system could well serve the OTC markets, and it may make sense to consider such a proposal in the future.

In their written responses, regulators cited several benefits associated with clearinghouse offset. Included among them were:

(i) Allows greater participation/provides increased competition;
(ii) Increases liquidity for the market;
(iii) Potentially lowers overall costs to operate in the markets;
(iv) Reduces counterparty credit risks;
(v) Guaranteed settlement;
(vi) Improves data collection and trade matching;
(vii) Standardizes back-office systems, leading to further operational cost savings; and
(viii) Facilitates prompt closing of a failed participant's positions.

Despite these benefits, the regulatory community feels that drawbacks associated with clearinghouse implementation and potential systemic issues outweigh the advantages. The FDIC stated that "clearinghouse offset is practical only with the use of standardized contracts, and that the loss of flexibility [associated with clearinghouse offset] would outweigh any benefits." The FDIC added that OTC swaps [as they are currently structured] can provide more precise hedging and risk management vehicles. The OTS indicated that "some types of swaps could be run through a clearinghouse mechanism, but there is still a large segment [of the swap market] for which a clearinghouse would be an inefficient solution."

By far the most important concern on the part of regulators was the issue of systemic risk. The FDIC was of the opinion that "a clearinghouse mechanism could potentially expose dealers to unquantified, and possibly very large, failure risk of a member dealer, unless the clearinghouse itself was substantially capitalized." The FED added that "multilateral netting through a clearinghouse may obscure the level of

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[43] Including the New York State Banking Board.

[44] The CFTC issued an order generally exempting swaps from regulation under the CEA on January 14, 1993 (58 FR 5587, January 22, 1993). In that order, the CFTC noted that it believed a clearinghouse system for swap agreements could be beneficial. However, because clearing mechanisms were not yet in existence and since they may take many forms and raise different concerns due to varying forms and participants, the CFTC did not include clearing in its exemptive order. The CFTC did, however, explicitly state that it would consider further exemptive relief and that it would evaluate the terms and conditions of clearing systems that market participants wish to use.

exposures instead of achieving reductions in actual credit and liquidity exposures...multilateral netting systems can shift and concentrate risks in ways that could increase systemic risk by increasing the likelihood that one institution's failure will undermine the condition of others." Finally, the OCC noted that "the concentration of risks on the clearinghouse exposes all participants to the risk that the clearinghouse itself may fail."

The Securities and Exchange Commission (SEC) took a more favorable view from the other regulators on the issue of systemic risk. On this matter, the SEC noted: "...a clearinghouse offset that included multilateral netting by novation (netting by novation has been recognized by regulators in capital adequacy rules while close-out netting, which is one of the BIS proposals, is currently under consideration) would reduce systemic risk by improving credit availability and enhancing market and dealer liquidity." The SEC added that "many details need to be worked out before an effective clearinghouse offset mechanism could be established."

The SEC suggested that the establishment of one or more clearinghouses that specialize in the processing of trades in swaps may improve the current regulatory framework for the swaps market by helping to ensure the legal certainty of swaps transactions and by improving settlement efficiency through payment netting. A swaps clearinghouse also would provide a focal point for coordination of industry practices and communication with interested regulators. The SEC stated that while there are regulatory issues involved in the establishment of a swaps clearinghouse, regulators should actively evaluate the development of such facilities.

In qualifying suggestions that dealers and end-users could benefit from well designed clearinghouse arrangements, the OCC stated that "national banks should only participate in those clearinghouse arrangements that meet the six minimum standards for netting and settlement schemes."[45] Regulators also noted that some market participants may benefit more than others should a clearinghouse system be implemented for the OTC markets. The OCC indicated that end-users "may derive more benefit than dealers from the substitution of the clearinghouse's creditworthiness for that of individual counterparties, as end-users may not be as adept as dealers at analyzing the credit risks of counterparties." The OCC added that dealers, on the other hand, "may benefit more than end-users from the benefits of multilateral netting....dealers may also derive competitive benefits from a clearinghouse arrangement to the extent that participation in the clearinghouse masks the dealer's portfolio position." The other regulators generally concurred that dealers have the most to lose from a clearinghouse arrangement, while small, less creditworthy participants have the most to gain.

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[45] See the Lamfalussy Report.

Question #15

Are there adequate mechanisms currently in place to protect unsophisticated end-users of derivative products? If not, what are your recommendations?

There is consensus among regulators that the Commodity Futures Trading Act and CFTC regulatory controls currently in place are adequate for protecting unsophisticated end-users of exchange-traded derivatives. For example, the NYSBB noted that regulations of the SEC require that any potential trader of securities options be provided with a booklet entitled "Characteristics and Risks of Standardized options." The OCC indicated that Futures Commission Merchants (FCMs) are required to deliver to their customers risk disclosure statements with respect to futures and, where applicable, options. The OCC believes that the disclosures currently in place appear to provide adequate information concerning the risks inherent in exchange markets. The CFTC noted that customers buying or selling exchange-traded futures and options contracts under the Commission's jurisdiction are covered by the anti-fraud and other customer protection provisions of the CEA as well as comprehensive CFTC regulations which require Futures Commission Merchants to abide by certain rules and regulations. The CFTC also carries an active enforcement program to enforce the provisions of the CEA and the Commission's own regulations.

There are fewer supervisory measures in place for the OTC markets. Regulators noted that additional supervisory measures may seem appropriate for these markets, but agree that the mechanisms currently in place are generally sufficient to protect unsophisticated end-users of derivatives. The SEC noted that most derivative trading occurs among financial and other institutions that, generally, have the bargaining power to obtain necessary information to evaluate investment strategies. Given this, suitability may not be as big an issue as many people perceive it to be. Regulators reported that the following current measures address suitability concerns for participants in the OTC markets:

- The exemption from the Commodities Exchange Act (CEA) provided by the CFTC for swaps and related OTC derivatives covers only transactions entered into between "eligible swap participants,"[46] which generally are limited to commercial and financial entities and other participants that are considered to have relatively high levels of financial expertise.[47] Given this, a certain level of sophistication is required simply to participate in these markets. This is a strong measure to protect unsophisticated investors (by keeping them **out** of the market).

- Regulations currently in place require that entities dealing in financial

[46] "Eligible swap participants" are defined by the CFTC to include: depository institutions, trust companies, insurance companies, investment companies, commodity pools, corporations and other business organizations that have total assets exceeding $10 million or that meet certain other criteria, employee benefit plans with assets of at least $5 million or the investments of which are managed by certain regulated entities, governmental entities, broker-dealers, futures commission merchants and floor brokers and traders, or natural persons with total assets exceeding $10 million. [See 12 CFR 35.1(b)(2) (as added by 58 FR 5587 (January 22, 1993)].

[47] Source: Federal Reserve Board responses.

derivatives have policies and procedures in place to monitor the financial strength of their clients to ensure that they can bear the consequences of adverse market movements.

• The regulatory agencies and other official bodies monitor the behavior of dealers and market participants to reduce the potential for fraud and misrepresentation.

• Each counterparty to a swap or similar transaction in the OTC market is exposed to the credit risk of its counterparty for the entire term of the swap. Unlike trading markets, such as the securities markets, where buyers and sellers have no continuing exposure after settlement of a transaction, a participant is a swap or similar transaction has a continuing exposure to the non-performance of its counterparty for the duration of the contract.[48] This exposure provides dealers and other swap participants with a strong incentive to satisfy themselves that their counterparties are sufficiently able to handle the risks associated with the derivative transactions in which they are engaged, particularly where lines are established to cover multiple transactions.[49]

The OCC offered several suggestions as to how to provide increased protection to end-users of derivatives:

• Regulators of securities firms and financial institutions marketing derivative products should insist upon high ethical standards in the sales practices of derivative units. Salesmen of derivative products have a duty to understand their clients' needs, and should provide documentation to evidence their providing full disclosure and gaining client approval.

• Market participants should encourage any actions which serve to improve the understanding of derivatives by potential end-users. For example, industry surveys, studies, seminars etc...are beneficial.

• Market leaders should continue efforts to develop standardized legal documentation for derivative transactions.

The FED noted, however, that "past experience does not appear to justify additional protective measures for end-users." They added that suitability rules may be difficult to develop. To support their argument, the FED explained that end-users of derivative products cover an extremely broad spectrum, and the level of sophistication of an end-user with respect to derivative instruments is not necessarily related to size, net worth, or nature of the organization. The FED noted that some end-users engage in a very limited number of transactions tailored to cover particular exposures or in connection with specific transactions. Other end-users with greater

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[48] While both parties to a swap have exposure to one another, the risks associated with option contracts are asymmetrical. The buyer of an option is exposed to the risk of non-performance by its counterparty until expiration or exercise of the option, but the seller of the option has no exposure to the buyer once the option premium has been paid.

[49] Source: Federal Reserve Board responses.

experience and more complex sources of exposure may use OTC derivative products much more actively in their overall risk management. Given the broad range of entities that can legitimately benefit from the use of derivative instruments, it would be difficult to develop standards to protect unsophisticated parties that would not also inhibit their efforts to reduce risks.[50]

The FED did add, however, that "while further protective measures do not appear to be necessary in the current [OTC] market, as the OTC markets expand it may be appropriate to consider other measures to assure that end-users are aware of the risks of the transactions they enter into." The FDIC also noted that "prohibitions on the use of certain forms of derivatives may effectively limit certain credit or market risks."

General consensus among the regulators to alleviate suitability problems in the OTC financial derivative markets was to increase levels of education and knowledge, and to provide appropriate disclosure.

[50] This difficulty is reflected in the experience of the CFTC with users of exchange-traded derivatives. The CFTC withdrew its proposal for a "suitability" standard for application to users of futures contracts, indicating that it had not been able to develop "meaningful standards of universal application" at that time. 43 FR 31886,31888 (July 24, 1978). The National Futures Association (NFA) also attempted to formulate a "suitability" standard, but ultimately adopted a "know-your-customer" rule in combination with disclosure requirements. The NFA "know-your-customer" rule applies only to customers that are individuals, and requires relatively limited information compared with that generally required by a counterparty in a derivative transaction.

Question #16

What kind of stress test simulations do you recommend to account for the different types of risk which arise as a result of financial derivative activity?

Each of the banking agencies recognizes the importance of stress testing on a derivative portfolio. The simulations must be tailored to the needs and capabilities of individual institutions. Stress testing should account for market, credit and liquidity risk. The market risk component should evaluate the effect of changes in both interest rates and exchange rates. The agencies proposals for risk-based capital based on interest rate risk require simulations for capital purposes. Both the FED and OCC indicate that stress testing must take into account "worst case" scenarios. Historical data may not adequately provide for extraordinary events such as the recent increase in the volatilities of European exchange rates or in dramatically accelerated pre-payments of mortgages. The FED emphasizes that primary responsibility for designing proper simulations for an institution lies with senior management with appropriate review by the Board of Directors.

The CFTC indicates that the exchanges and clearinghouses under CFTC jurisdiction have developed several types of simulation models. For example, the Chicago Mercantile Exchange uses a portfolio margin model called Standard Portfolio Analysis of Risk (SPAN) that expressly accounts for certain types of risks. SPAN determines margin levels by performing simulations that estimate the maximum potential one-day portfolio loss that might occur under extreme movement's in the underlying asset's contract price. In addition the SEC indicates that it is working with the Options Clearing Corporation towards development of a theoretical pricing model for exchange traded options that would be used to determine "haircuts" for broker-dealers' standardized options positions under the net capital rule.

For OTC derivatives, the CFTC indicates that it would be more difficult to design stress tests. Because OTC derivatives are customized non-standard products without a clearing organization and for which reference prices may not exist, it may be difficult to design effective simulations.

Question #17

Please comment on your agency's view of the proper use and level of collateral in derivative transactions.

Collateral is the margin deposited by customers to their FCMs and clearing members to the clearing organization, in the case of exchange markets, and to counterparties, in the case of OTC markets, to secure their performance on the contracts they hold.

Regulators agree that the use of collateral is increasing among participants in the financial derivative markets, and they expect this trend to continue. Regulators also agree that prudent uses of collateral arrangements will add to the stability[51] in the derivative markets by limiting credit exposures.[52] According to the FDIC, collateral arrangements are appropriate given that excessive or unwarranted exposure on an unsecured basis would be subject to regulatory criticism on safety and soundness grounds. The SEC noted several benefits from the maintenance of adequate margin levels. First, adequate margin serves to reduce speculative trading by highly leveraged participants, and second, adequate margin levels reduce the capital exposure of broker-dealers and clearing firms during periods of market volatility.

The FED qualified its favorable judgement of using collateral in derivative transactions. According to its answers, "use of collateral must be incorporated in the overall context of the institution's credit process...banks should still conduct a detailed credit risk analysis that includes a careful evaluation of the counterparty's overall ability and willingness to perform on a contract as agreed." It added: "Once the creditworthiness is determined, the bank should establish limits, [and at this time] consider the value of any collateral that reduces credit risk." Given this, the FED stated that "obtaining collateral does not exempt the bank from following basic credit analysis procedures."

In agreeing with the other regulators that collateral arrangements are appropriate, the FED noted that "the use of collateral...is an acceptable practice provided certain minimum safeguards are met." It identified the safeguards as 1) the bank having control of the collateral, and that it should be readily marketable, and 2) the bank having the ability to terminate the contract if the collateral becomes impaired, and having the ability to substitute or liquidate the collateral in a timely manner.

The regulators noted several drawbacks associated with collateral. The OCC,

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[51] The CFTC noted that during the October 1987 financial markets crash, the daily clearance and settlement systems for the exchange markets functioned well despite margin flows of unprecedented size, reaching as much as $2.5 billion on a single day. On the exchange markets during this period, no customer funds were lost as a result of an FCM failure or default and, in fact, no FCM failed during this critical period.

[52] The OTS reported that savings associations are required to restrict their choice of counterparties to banks and well-capitalized nonbank counterparties.

for example, has discouraged banks from encumbering significant amounts of their highest quality, and most liquid, assets. It added that "bank managers should ensure that sufficient amounts of other liquidity sources would be available to meet funding needs in stable as well as deteriorating scenarios." The OCC also discourages banks from entering into arrangements where only the bank is required to post collateral.[53] The SEC noted that "although it may be preferable that all transactions be collateralized, industry competition may make this impracticable."

The OTS suggested that "excessive collateral requirements might discourage the use of derivatives for risk reduction purposes." It added that "mandatory collateral requirements could reduce liquidity in the derivative markets." On this topic, however, the OCC noted that "increased use of collateral arrangements should also improve market liquidity because such arrangements would enable more participants to access these markets."[54]

The FED reported that excessive reliance on collateral triggers, particularly those based on creditworthiness, can be imprudent. Such collateral arrangements could place substantial liquidity pressures on a counterparty just when its creditworthiness is weakening and its access to liquidity is more limited.

As with any other factor which serves to support an activity, imprudent or excessive uses of collateral will be detrimental to the very purpose of the activity.

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[53] This is an example of a unilateral collateral arrangement. Unilateral arrangements are typically used when one of the counterparties is less creditworthy than the other.

[54] Collateral is widely perceived as being beneficial and conducive to participation in the financial derivative markets. It is important to note, however, that mandatory collateral requirements which are too high will be assessed by certain firms as too costly, and will consequently prevent them from entering into transactions. Determining the appropriate level of collateral to fulfill its purpose while balancing its cost repercussion is a delicate and critical component of risk management.

Question #18

When assessing a counterparty for credit risk, how much relative emphasis should be placed upon factors such as capital, disclosure and credit rating? For example, should a credit rating be a proxy for capital?

Regulators agree that in assessing the creditworthiness of a counterparty, an institution should always conduct its own independent credit analysis, and not rely solely on separate factors such as credit ratings. Regulators suggested that the independent credit analysis for off-balance sheet activities should take the form used to evaluate on-balance sheet credit exposures (financial ratio, earnings, profitability, liquidity, and debt capacity analysis) with extra emphasis on management talent, reputation, and operational capability to account for the more complex nature of derivatives. The FED noted that independent review by an institution could produce different insights and conclusions than reached by others.

Credit ratings are a good indication of a firm's overall capital strength, but are not a substitute for capital standards. A credit rating is a static measure, i.e., an evaluation at a certain point in time. Given the dynamic nature of financial markets, it is conceivable that a firm's capital position could well change between the time the rating was assigned and the time the rating is used for judgement purposes. This is one of the primary reasons an entity should conduct its own independent and current credit evaluation before entering into a transaction with a counterparty.

Regulators noted that a firm's independent credit analysis is predicated on full financial disclosures by a counterparty. In other words, proper credit analysis cannot be conducted if the analysts conducting the credit review do not have all the information they need. Regulators added that other important factors which are needed to assess a counterparty's credit risk where derivatives are concerned include the level of capitalization of a counterparty, the regulated nature of the entity in question, and accuracy of information.

In response to this question, the CFTC noted that "In futures markets, it is unnecessary for a customer to assess the credit of the counterparty to an exchange transaction and, indeed, it is effectively impossible to do so because the specific counterparty is unknown." The CFTC added, however, that credit ratings may be easier for certain end-users to rely on than attempting to independently analyze capital.

Question #19

Are executive decisions regarding derivatives, on average, concentrated in too few individuals in each institution to catch problems in a timely manner? Should the decision-making process, where derivatives are involved, be decentralized to enhance internal controls?

The inherent complexity of many derivative instruments is such that derivatives may be fully understood by a limited number of people in any single institution. Therefore, banks must be careful to design control procedures that ensure that sufficient checks and balances are in place and that the risks presented by the concentration of technical knowledge are adequately managed. Management and the Board of Directors are responsible for ensuring that internal control systems provide reasonable assurances that errors and omissions are prevented or revealed before major problems develop.

The CFTC indicates that senior management must have expertise sufficient to evaluate the effectiveness of risk control arrangements. Decentralization could by-pass management review and thus increase risks.

The SEC states that major securities firms are structured so that derivative trading activities are subject to several layers of review and are not concentrated in too few individuals.

Question #20

Do compensation policies currently in place adequately discourage undue risk-taking? For example, if employees benefit financially from risk-taking in a direct manner, how is such risk-taking controlled?

Performance-based compensation policies may provide incentives for improper risk taking. In some cases, it appears that trader misconduct, possibly motivated by the possibility of increased compensation, may have played a part in bank losses related to derivatives. Compensation policies should take into account risks and returns. Just as traders are highly compensated for their skills, employees that audit, control and manage trading activities should be adequately compensated to discourage turnover. Individuals charged with internal control over traders must be given adequate authority and independence.

Institutions compensate traders in direct ratio to their risks and returns. The down side of this practice is that individuals may seek excessively risky positions. Profits from derivative activities are put in a "bonus pool" by most banks that trade derivatives. Management controls should ensure that the bonus pool represents actual profits that are recognized taking into account expenses and any estimated losses.

Employees subject to performance-based compensation put in this situation must closely be monitored. It is principally the responsibility of other segments of the firm apart from the trading floor to measure, monitor and limit risk. The strict segregation of the management, policy, and control functions from the trading and risk taking arms of the institution is particularly important in this regard.

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Question #21

What is the level of systemic risk resulting from derivative activities? Do you agree with those who assert that derivative activities are concentrated in too few institutions?

The FED reported that considerable thought has been given to the question of systemic risk (the risk that a disruption by any participant or group of participants causes widespread difficulties throughout financial markets), and that greater awareness and understanding of risk and the enhanced methods of managing risks have reduced the likelihood of systemic problems. The agency added that this trend will continue over time as industry and supervisory practices advance.

Regulators[55] agree that there are two principal areas in which derivative activities could potentially pose systemic risks to U.S. markets:

- **Concentration**

As discussed in Section I of Part One of this Report, there is concentration in the financial derivative markets. In other words, there are very few dealers who make markets for derivative instruments. This concentration of activity poses questions of systemic risk should one of the large participants fail. Concerns arise since such a failure could have a detrimental ripple effect on smaller firms and could reduce liquidity in the markets.

The FED undermines the notion that concentration is a serious concern, noting that "the fact that market-making is feasible only for firms in a strong financial condition and with long experience in dealing with similar risks...is a positive element." The small number of firms, although responsible for a significant market and the ensuing responsibilities, appear to be well aware of their situation and the associated risks. Consequently, these firms have adapted their risk management procedures and safeguards to make concentration an issue of little relevance.

The SEC believes that it, and self-regulatory organizations (SROs), have in place sufficient regulatory controls to ensure that the failure of a registered broker-dealer, for whatever reason, could be handled without resulting in serious, system-wide problems. The agency added that it does not believe that derivative activities are concentrated in too few institutions. Noted the SEC, "While concentration is a concern, OTC derivative dealers tend to be well-diversified, highly capitalized firms that are, arguably, well-suited to weather market developments."

[55] Principally the FED, the SEC, and the New York State Banking Board.

- **Interrelationships Among Markets and Financial Institutions**

With the passage of time and the development of new, and more sophisticated technologies, interrelationships among markets and financial institutions has become closer. Markets and firms, now more than ever before, work, move, and depend on each other. These increased linkages allow for systemic risk problems in that a disruption will quickly spread to other participants and markets, creating a compounding, or "snowball" effect as the disturbance moves through the system.

This issue was evident during the U.S. stock market crash of October 1987. The dynamic hedging sale of stock index futures and stock baskets by institutions following "portfolio insurance" strategies led to a precipitous fall in the price level of equities. Evidence of the "snowball" effect was widespread as market prices fell at an increasing rate. The SEC noted that during the 1987 crash, the cumulative effects of selling by a group of large institutions following the same strategies had a devastating impact on the stock and futures markets. This indicates a necessity for caution on the issue of systemic risk; clearly, this issue is not to be taken lightly.

The risks associated with derivative activities are similar to the risks found in traditional bank activities. However, the complexity of derivatives makes risk management for these instruments somewhat more difficult. Given this, as well as supervisory initiatives, financial institutions involved in derivatives have made significant efforts to upgrade their risk management capabilities and to seek new ways to reduce risks. In other words, although derivatives present a more complex risk management picture, firms have accounted for this by adapting their systems and procedures to contain such risks.

Question #22

Cash liquidity risk for a firm appears to be of greater concern the greater is a firm's involvement in derivative activities, the greater is its reliance on short-term funding, the lower is its credit standing, and the more restricted is its access to central bank discount or borrowing facilities. Therefore, in contrast to depository institutions who, among other things, have access to the discount window, securities firms may find cash management requirements, such as maintaining margin requirements, arising from large derivative portfolios to be more challenging. Compared to depository institutions, how does the less liquid nature of the securities business effect its derivative activities and the risks associated with such activities?

Securities firms have considerable experience in managing their liquidity needs. Securities firms and banks are generally on an equal footing with respect to the liquidity necessary to conduct derivative activities. Securities firms generally have liquid asset bases, while banks have a more illiquid asset base, due to assets such as loans. Banks, however, have access to the FED discount window for purposes of liquidity. However, the FED states, "securities firms may find themselves short of cash, especially if their creditworthiness deteriorates."

Every financial intermediary, whether organized as a bank, a securities firm, or otherwise, needs to carefully assess and plan to meet unusual liquidity pressures, including those that might accompany a deterioration of its creditworthiness. In this context, the firm should realistically assess its ability to readily close out positions in OTC derivatives. Those assessments should then be incorporated in planning for the management of liquidity needs. Further, the CFTC points out that use of derivatives may enhance a firm's liquidity.

Question #23

Criticism of speculators in the derivative markets, primarily exchange traded derivatives such as currency futures and options, has focused on the alleged ability of such speculators to manipulate markets. Concerns have also arisen as to potential depository institution exposure as a result of speculators' activities. Please comment on these criticisms and whether or not such speculators should be subject to increased regulation or supervision.

Regulators uniformly agree that speculators provide a useful role by making markets more liquid, balanced, and efficient. Speculators are willing to assume risks that others are seeking to hedge; speculators are willing to have risks transferred to them and thus reduce uncertainty and risk to those seeking to hedge. This process provides liquidity to the markets.

Regulators noted that while speculators provide a positive element to competitive and free markets, the drawbacks associated with speculative practices are accounted for by regulatory action and the very nature of the markets (regulators reported that the sheer size and activity of the markets make it very unlikely that an individual or institution, or even a group of speculators in collusion, would be able to manipulate the markets for personal gain). The SEC reported that federal securities laws have established a regulatory framework to deter and detect market manipulation. Self-Regulatory Organizations (SROs)[56] rules minimize the potential for market manipulation, which is forbidden in the futures and options markets.

In addition, the CFTC reported that the regulatory structure for exchange-traded futures and options is designed to protect against manipulation, which, as noted above, is forbidden. The CFTC regulatory structure includes several items:

- Review of contract design;
- Market surveillance by both exchanges and regulators;
- Large Trader reports revealing contract holdings of one customer across clearing firms;
- Communication with large futures market participants in order to determine their intentions to make or take delivery;
- Limits on speculative positions for all contract months, with lower limits in the delivery month to preclude the ability of speculators to control a large number of contracts during a period in which supply of the

[56] SROs are the principal means contemplated by the federal securities laws for the enforcement of fair, ethical, and efficient practices in the securities and commodities futures industries. SROs include all the national securities and commodities exchanges as well as the National Association of Securities Dealers (NASD), which represents all the firms operating in the OTC market, and the Municipal Securities Rulemaking Board (MSRB), created under the Securities Acts Amendments of 1975 to regulate brokers, dealers, and banks dealing in municipal securities.

underlying good may be limited; and

- Emergency powers to address situations in which manipulation is threatened or has taken place.

Although the above framework does not apply to OTC derivative markets, manipulation in these markets seems unlikely to occur. The reason for this is that the vast majority of OTC derivatives are highly liquid and the supply of the underlying currencies or deposits are sufficiently large as to make manipulation of the indices on which OTC derivatives are based extremely difficult.[57]

Finally, the regulators[58] noted that it would be impossible, and even counterproductive, to regulate speculators. The OCC reported: "...the global nature of the OTC derivative markets presents a practical impediment to the ability of the U.S. to "regulate" their activities. Any regulation of, or attempt to regulate, such speculators may only drive their trading activities to offshore markets with little overall effect on the market impact of such activities (and a possible loss of revenue for the U.S. financial institutions which trade with such speculators)." The OTS added: "Attempting to regulate the activities of one type of speculative investor would likely invite in other investor[s] that would be able to profit from the absence of regulated speculators. In general, if potentially profitable speculative opportunities exist, markets will find ways to innovate around government regulations, provided that the financial rewards of circumventing regulations exceed their costs."

[57] Source: Federal Reserve Board responses.

[58] Principally the OCC and OTS.

Question #24

What, if any, effect will the depositor preference provision of the Omnibus Budget Reconciliation Act of 1993 have on the derivative markets?

It is still difficult to assess the impact of the depositor preference provisions of the Omnibus Budget Reconciliation Act of 1993. The new national depositor preference statute established six categories of claims at a failed institution in an FDIC administered receivership. Secured claims are administered outside of the statute.

According to the FDIC, the depositor preference provision has resulted in an increased tendency for the FDIC to choose deposit transfers over purchase and assumption transactions in failing bank resolutions. This is due to the inherent uncertainty of long-term asset recoveries in those cases where deposit claims will not clearly be covered by asset liquidations. In conjunction with the least cost resolution provisions of FDICIA, depositor preference has made it increasing likely that liabilities, including qualified financial contracts not transferred as permitted by FIRREA, will be retained by a receiver. This interjects a greater degree of counterparty credit risk for banks involved in derivative activities.

Depositor preference will increase by an undetermined and most probably varying amount, the costs of participating in the derivative markets, both for dealer banks and end-users. Depositor preference means that dealer banks will be unable to rely on bilateral netting agreements with unlimited two way payments to either reduce credit risk or provide an argument for reduced capital requirements. Depositor preference may increase the requirement of collateral for bank counterparties.

The FED indicates that depositor preference may cause a reluctance to deal with U.S. banks as counterparties, thereby increasing costs and placing U.S. banks at a disadvantage to foreign competition. The FED also believes that depositor preference may also further complicate the resolution of failing institutions.

The OCC points out that there have been differences of opinion on depositor preference at the ratings agencies with Moody's making certain downgrades, while Standard and Poor's did not. In addition, the OCC believes that if the FDIC saves money through depositor preference, this could lead to lower deposit insurance premiums thereby improving banks' cost of funds. In the long run, lower premiums could mitigate increased funding costs due to depositor preference.

Question #25 (SEC and CFTC)

Please provide a list and discussion of [SEC and CFTC] proposals regarding the regulation of derivatives currently under consideration. Also, please provide, to the extent possible, a discussion of the CFTC study currently underway.

The SEC stated that it has a variety of proposals outstanding with respect to the operation of these markets and the clearing agencies associated with them. The SEC stated, however, that it has one primary outstanding proposal specifically regarding the regulation of OTC derivative products, and discussed this proposal only. The SEC's Concept Release solicited comment on a broad range of capital standards imposed by the net capital rule on broker-dealers participating in the derivative markets.[59] In examining the treatment of derivative products, and particularly OTC derivative products, the Concept Release focused primarily on the market and credit risks to which participants in derivative markets are exposed and presented several alternatives to the current treatment of these instruments under the net capital rule.

The CFTC commented only on its Study.[60] The CFTC Study includes a recommendation for establishment of an interagency task force to explore a number of areas relevant to OTC derivative activities. The Study recommends a number of specific areas for consideration by such an interagency council, including information access, pricing issues, disclosure issues, risk valuation issues, internal controls, clearing facilities for swaps, and the scope of regulatory oversight in this area, particularly with respect to unregulated dealers in OTC derivatives. The CFTC Study also highlights areas relevant to OTC derivative activities for further review by the CFTC, including issues relating to clearing facilities for swaps, rules to facilitate risk assessment with respect to affiliates of FCMs, review of Treasury Amendment issues, and review of the Department of Treasury's proposed regulations concerning the tax treatment of business hedges.

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[59] For a more detailed explanation of the Concept Release, see discussion of Question #2.

[60] See the Report of the Commodity Futures Trading Commission, "OTC Derivative Markets and Their Regulation," CFTC, Washington, DC, October 1993. The study was released on October 25, 1993.

Question #26 (SEC)

Please provide, if available, a summary of comments received or any relevant update on the SEC Net Capital Concept Release No. 34-32256 dated May 4, 1993.

To date, the SEC has received five comment letters in response to the Concept Release. The SEC described four of the letters.

(1) The Securities Industry Association and the Chicago Board of Trade requested that the comment period be extended until the end of 1993. (The comment period has been extended to December 17, 1993.)

(2) The Registration Exemption Committee of the North American Securities Administrators Association stated that commodities and banking regulatory agencies should be involved in the SEC's development of proposals regarding derivatives because of systemic risk implications of derivatives.

(3) The American Stock Exchange (AMEX) commented that the SEC should not take any action that would adversely affect the listed market for derivatives by making the OTC market relatively more attractive. In addition, because there are not position and exercise limit requirements in the OTC market, the AMEX requested that the SEC review the need for such requirements in the listed market.

(4) The Risk Management Center (RMC)[61] provided extensive comments regarding the credit risk associated with derivatives.

(i) The RMC stated that it prefers the second approach to assessing credit risk,[62] which would require a broker-dealer to take a capital charge based on some percentage of the broker-dealer's exposure to all counterparties and would be higher for lower-rated counterparties. The charge would be based entirely on the credit rating of the counterparty. (Question 16 of the Concept Release.)

(ii) Regarding comment on how the capital rule should be structured to reduce potential future credit exposure, the RMC suggested that a broker-dealer's future credit exposure be determined based upon a "portfolio approach," which, to the extent netting is enforceable, should be based on the overall net expected cash flow of a broker-dealer. To the extent that netting arrangements are not enforceable, the RMC suggested a "greater of longs or shorts" approach which would apply a capital charge for future credit exposure on the worst case scenario. (Question 17 of the Concept Release.)

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[61] The RMC is a coalition of Chicago financial institutions and businesses including major banks, the four Chicago exchanges, universities, trading and investment firms, and corporations.

[62] The first approach would require broker-dealers to take two charges to their capital, a basic charge and a concentration charge.

(iii) Regarding the extent to which netting of contracts with a single counterparty should be permitted, the RMC indicated that netting should be permitted to the extent multiple products are documented under the same master agreement and netting is enforceable under the laws of the applicable jurisdictions. In jurisdictions where enforceability of netting is not clear, a gross positive mark-to-market or greater of longs or shorts method should be applied to the calculation of capital. (Question 18 of the Concept Release.)

(iv) Regarding the appropriate cushion to be added to the "credit equivalent amount" used in the calculation of capital for credit risk associated with OTC derivatives, the RMC suggested that more refined distinctions be made between contracts of varying durations, such as five and ten year contracts, which are common. (The Concept Release suggested two categories: less than one year; and greater than one year.) (Question 19 of the Concept Release.)

SECTION IV

Conclusions and Recommendations

SECTION IV -- CONCLUSIONS AND RECOMMENDATIONS

Few issues are more perplexing from a public policy perspective than those that relate to regulation of derivative products. Conventional wisdom is that derivatives trading is currently being conducted in a manner that does not adversely effect the safety and soundness of the financial system and does not represent significant systemic risk. However, the sheer magnitude of the market and the extraordinary growth in product trading present worrying concerns. Regulators have no choice except to establish as the highest possible priority the need to be vigilant in guarding against the potential risks to individual institutions and to the financial system as a whole posed by derivatives trading. Despite the apparent benefits of wider use of derivative products, a persuasive argument can be made that only sophisticated users with comprehensive risk management strategies, qualified personnel, and deep financial reserves should participate actively in this exploding market.

In analyzing the public policy concerns related to derivatives, legislators and regulators have an obligation to review repeatedly the following questions:

1) Are adequate uniform capital, accounting and disclosure standards for derivative products in place?

2) Is there adequate coordination between U.S. and foreign regulators?

3) Are there unique issues regarding the payments, clearing and settlement systems related to derivatives?

4) What are the benefits realized by users of derivatives for risk-management purposes?

5) Do dealers and end-users of derivatives have adequate internal controls?

6) Are there adequate protections in place to protect unsophisticated end-users?

7) How extensively are derivatives used for purposes of speculation and what should be the role of speculators? and

8) What is the level of systemic risk posed by derivatives?

Policymakers must be careful to understand the broad array of products and services that are subsumed under the rubric of "derivatives." For example, the ratings agencies assign widely varying levels of credit risk to different products which are all considered derivative instruments. Commodity or equity contracts, currency swaps, currency options, currency futures or forwards, interest rate swaps, interest rate options and interest rate futures or forwards represent different types of derivative products, all with an entirely separate risk factor. This highlights the sophistication in the market and also highlights the problems that policymakers may confront as they consider the need to supervise this market.

In examining the different types of derivative instruments, it is important to acknowledge the benefits that derivative products provide as a risk management tool for both financial and non-financial firms. By allowing companies to better manage the risk on their balance sheets, the prudent use of derivatives helps market participants guard against market volatility, thus providing a more stable environment for job creation. In particular, prudential use of derivatives products insulates companies from volatile interest rate and foreign currency exposures.

In addition, the lower cost of funds made possible by the growing use of derivative instruments has provided more affordable housing and cheaper student loans while decreasing taxpayer exposure at government sponsored enterprises such as Fannie Mae, Freddie Mac and Sallie Mae. In fact, the U.S. Government may want to examine the advantages of these products to lower its funding costs and thereby reduce the budget deficit. Sovereigns throughout the industrialized world use sophisticated financial techniques, including derivatives, for more efficient management of their financial needs to the direct benefit of their taxpayers. Although risks exist in the speculative use of derivatives, a strong case can be made that for hedging purposes, greater use of derivatives should be contemplated by the U.S. Government. In fact, the U.S. Treasury today may be assuming a greater risk in its current efforts to shorten maturities of U.S. borrowings than it would be in using derivative products for financial management purposes.

While derivatives make up only a small fraction of the trading activities at insured financial institutions, and while derivative products often serve a useful role in reducing rather than increasing institutional risk, the potential exists that these products could also be used for speculative activities. There is no escaping the circumstance that derivative activities in the '90's must be examined in the context of the decade of the '80's where America over-leveraged itself with junk bonds, junk real estate and junk S&Ls of its own making and junk debt of LDC manufacture.

It may be irrational to draw parallels with other circumstances in other time frames, but there are several aspects of mistakes made in private sector finance over the past several decades worthy of review in the context of derivatives trading.

As we look at Penn Square, which symbolized an imprudent effort to advance a credible idea -- i.e., merchant banking -- it is impressive that several of America's largest, most respected banks fell prey to the idea of rewarding a few key employees on a quasi-commission basis for increasing volume in loan originations. Quality which had been the hallmark of Continental Bank in secondary agricultural loan purchases was given limited purview with the more fashionable oil field generated loans of Penn Square. Likewise, as we look at the high flyers in the S&L industry in the 1980's, it is impressive how they understood that extraordinary leveraging implied socializing risk for the public taxpayer in the long run, but privatizing profit for the few in the short run. In federally insured banking institutions the small number of employee traders dealing in derivatives instruments today are in effect being paid multi-million dollar commissions, privatizing individual gain but leaving risk to be absorbed by the shareholders of the institutions in the first instance and the public through the deposit insurance safety net in final resort.

As we look at the junk bonds of the 1980's, it is impressive how a credible social idea -- the need for secondary financing of below grade debt -- was mispriced and misadvanced. As we look at the growth of LDC debt in the 1970's and early 1980's, it is impressive how fast growth caused the nature of an historically risk-averse product to change and how little prudential protection emerged from the fact that a number of respected large institutions expanded market share together. Follow-thy-competitor policies produced beggar-thy-neighbor effects.

In this historical circumstance, bank management would appear to have a profound obligation to be particularly attentive to the risks inherent in markets that compound in size. Accountability must be the watch word. Here it should be stressed that bank assistance to customers who participate in hedging financial risk represents a readily defensible societal activity. But trading for an institution's own account carries quasi-gambling implications, a step removed from clear social purpose for which the taxpayer should be on the line. It is because of this circumstance that the call for governmental regulation cannot be dismissed.

In addition, human nature being what it is, the prospect of destabilizing speculation in certain types of these products cannot be ruled out. Financial markets and the risks involved change rapidly. New products are introduced every day and it is often difficult for private sector participants as well as policymakers in government to judge adequately new risks. Currency markets, for instance, which have been such a source of money center bank profitability in recent years, could become more problematic if new, less-sophisticated entrants attempt to play leveraged games with other peoples' money.

It should be noted that in analyzing ten years of trading results, quarterly trading losses were posted only four times by derivatives dealers -- once by J. P. Morgan and three times by First Chicago. Cumulative losses incurred in those quarters were just $19 million. These are dwarfed by the trading revenues earned in the other 36 quarters examined: $35.9 billion, which amounts to almost a 2,000 to 1 profit-to-loss relationship. The fact that trading activities have been so consistently profitable indicates that the proprietary risk taken by banks in these activities so far has been prudent or at least quite fortunate. These statistics give some comfort that risk management constraints have not been ignored in the private sector. However, all parties must recognize that while the past may be prologue, historical experience is not always a guide to the future, especially when a relatively new market explodes in size. Hence, regulators have an obligation to stay on guard as this marketplace expands in a time of unprecedented economic uncertainties.

For example, the question of the adequacy of regulation for insurance companies involved in derivatives activities appears to be an unresolved issue. Currently, regulation of insurance companies' derivative activities is handled at the state level. While apparently no material losses have been realized in the insurance industry related to derivatives trading to date, there is no indication that state insurance regulators have the expertise to monitor such trading. Therefore, legislating Federal accountability for derivative activities of unregulated companies is an issue that can't be ducked. Such an approach may involve regulating some derivatives trading by product type, rather than simply by type of institution. Segments of the derivative market might thus be regulated under a framework similar to the Federal

securities laws where regulatory standards exist for securities products, regardless of the type of issuer. Administration of a federal regulatory approach for derivatives could be handled by existing agencies coordinated through an interagency commission.

In the derivatives arena there is also the problem of new entrants. Herds that feed on tall grass don't go unnoticed. If problems develop in the derivatives marketplace, it appears that they will be less likely to stem from the major firms operating in the mainstream, than from firms that are new entrants or operating at the fringes of this market. Any regulation in the derivatives area must be premised on the assumption that all market participants are not equal in sophistication or integrity and that distinctions must inevitably be made between prudential and less prudential actors. Just as well-run, well-capitalized financial institutions have a powerful case for considerable deregulation today, poorly run, poorly capitalized institutions demand significant, if not draconian oversight.

As the market expands to new entrants, inevitably small businesses become increasingly involved. The more profitable a market becomes, the more likely that a large party will be in a position to take advantage of a smaller party. I am particularly concerned that the farther trading relationships take place away from the money centers, the further away business people are from eye contact and hand shakes, the more likely bottom line incentives will override ethical concerns in the relations of larger financial intermediaries to smaller, less sophisticated end-users. In these markets the small fish must be protected from the sharks. Disclosure rules are crucial. For example, the FDIC has suggested that there should be enhanced disclosures by dealers to end-users. In addition, the OCC's new guidelines suggest a form of suitability requirement for national bank dealers in their relationships with derivatives customers.

Regulators must be sensitive to questions of suitability related to derivative instruments. Wall Street cannot be allowed to use unsophisticated investors to absorb its problems. Looking back on the last decade, there is no doubt that if Wall Street had not used insured S&Ls as a repository for its mistakes concerning mortgage backed securities and junk bonds, then the taxpayer would be better off today. Where the profit motive exists, regulators must ensure that fair markets develop and unsophisticated customers such as small businesses and municipalities are protected.

Regulators must be extremely discerning in their supervision of derivatives. While not inherently destabilizing, derivatives provide ways of either leveraging or de-leveraging financial institutions. One institution's hedge may be another's speculation. In hindsight it is clear that in a rising interest rate market, derivative products would have been particularly useful for S&Ls during the late '70's and early '80's to hedge against interest rate risk. Such a use of derivatives as a financial management tool could have saved the taxpayer significant sums of money.

Alternatively, overuse or misuse of derivatives when markets turn can cause market participants to get into trouble. This is evidenced in the questions that still persist related to the case of Franklin Savings in Kansas. Merits of the legal circumstance aside, the Franklin case underscores the need for industry and regulators to share on a timely basis their concerns, and for risk management education to be a mutual responsibility.

The use of derivative instruments must be weighed from a policy perspective in terms of systemic as well as institutional risk, especially as such risk may relate to the federally insured deposit system.

In examining the risks posed by derivative instruments, three issues stand out: capital, accounting, and disclosure. Of these three issues, capital would appear to be the most important factor. Capital is the cushion that protects a firm from credit and market risk. For an insured institution, capital represents the best protection for the taxpayer from the risks inherent in the marketplace.

Below is a table summarizing the ten largest U.S. bank participants in derivatives trading, as of October 29, 1993:

	Total Assets	Total Derivatives	Credit Equivalent Exposure	Credit Exposure as % capital
CHEMICAL BANK	$110.4	$2,114.0	$31.9	268%
BANKERS TRUST CO.	63.9	1,802.3	29.5	571
CITIBANK	168.6	1,789.3	38.2	230
MORGAN GUARANTY TRUST CO.	103.5	1,537.5	37.9	458
CHASE MANHATTAN	79.9	1,026.1	23.0	269
BANK OF AMERICA	134.0	893.5	21.7	146
FIRST NATIONAL BANK OF CHICAGO	34.1	457.4	10.1	269
CONTINENTAL BANK	22.0	169.9	2.5	91
REPUBLIC NATIONAL BANK OF NY	28.4	167.7	2.7	104
BANK OF NEW YORK	35.8	92.2	1.7	41

[Source: Office of the Comptroller of the Currency]
[from the American Banker dated October 29,1993]

It is not an easy task to determine the amount of capital that should be dedicated or reserved by a bank for purposes of its derivative business. What is possible to note is that if market participants are not required to maintain strong capital positions and/or reserve against systematic risk, it will be non-participants -- community banks in the first instance through the deposit insurance safety net and the taxpayers in the event of a market debacle -- who will pick up the tab for the mistakes of a few.

While the new proposed BIS capital standards would take into account netting and apply separate standards for interest rate and market risks, new interest rate and market risk standards are not an adequate substitute for a strong leverage requirement. A strong leverage ratio remains the most important protection for taxpayers against risk in the financial system. It also remains the fairest way to

constrain competitive growth within the banking sector. One of the least analyzed parts of the American S&L expansion in the 1980's was the degree to which lack of attention to capital standards caused disproportionate deposit growth in certain institutions in a certain industry in certain parts of the country. Attention to leverage ratios is not only important in assessing taxpayer risk, but also for competitive equity, and regional and industrial credit allocation.

The issue of capital standards for derivatives trading is an area in which further research should be encouraged, recognizing that public sector judgments may not always coincide with private sector recommendations.

Concerning accounting and disclosure standards, greater harmonization of international standards should be strongly supported. Greater transparency is critical to the integrity of our financial markets.

One final area for supervisory concern that is often overlooked is the question of the legal risk involved in derivatives activities. Legal risk is currently a wild-card in the system and, as evidenced by the case of U.K. authorities in Hammersmith and Fulham, one that is unpredictable even in developed societies. Until this goal is reached regulators must be especially sensitive to this potential problem area.

In dealing with supervisory standards for capital, accounting, and disclosure, legislators have little choice but to rely rather heavily on the judgment of regulatory agencies. This leads to one of the most pressing challenges of government -- the need for careful attention to quality control in appointments. In general, the private sector, because of incentive motivations, is much smarter with money than the public sector. This is why it is particularly important to have people at government agencies with proven expertise. The government cannot be run with campaign managers, particularly at organizations that demand sophisticated knowledge such as the financial regulatory agencies. Appointments to these agencies must be made based on merit and not as a reflection of political indebtedness by a candidate to an individual or industry group. Nothing underscores the need for a government of meritocracy more than the challenges the Executive branch faces in regulating products such as derivatives.

Derivatives also underscore the need for the government to work with industry groups to monitor complex financial products. While the history of industry self-regulation has not been overly impressive, clearly to date, in the derivatives area, the private sector is leading the public, not only in the development of new market instruments, but with techniques to manage and constrain risk. Care, however, must be taken to insure that we not have a least common denominator approach taken to regulation which might be adequate only for one kind of institution in one time frame. Tomorrow's market circumstances and market participants may not be the same as today's.

RECOMMENDATIONS

1.) Bank and thrift regulators should retain a strong leverage capital standard to generally guard against risks at insured financial institutions, including risks posed by derivative instruments. Regardless of the new risk based standards that take into account netting, market risk and interest rate risk, there is no substitute for a strong leverage capital requirement.

2.) Comparable rules concerning capital, accounting, disclosure and suitability should exist whether derivatives activities are conducted by a bank, broker-dealer, insurance company or other type of financial institution.

3.) Regulatory agencies, led by the FED and Treasury should pursue international discussions to achieve harmonization of international standards related to derivatives trading with the understanding that U.S. standards may, if appropriate, be more stringent.

4.) An interagency commission should be established by statute to consider comparable rules related to capital, accounting, disclosure and suitability for dealers and end-users of OTC derivative products. In addition, the commission should meet regularly to keep abreast of changes in the derivatives marketplace and consider other issues related to derivatives as appropriate. Members of the commission should include the federal banking commission agencies, SEC, CFTC and the Secretary of Treasury or a designee. Uniform commission rules for derivatives should be applied to all market participants. Currently unregulated market participants, such as insurance companies, should be supervised by either the SEC or the Secretary of Treasury.

5.) Banking regulatory agencies should discourage active trading in derivative markets by insured institutions, particularly smaller institutions, unless management can convincingly demonstrate both sufficient capitalization and sophisticated technical capabilities.

6.) The federal banking agencies should conduct joint regulatory examinations for major derivatives dealers including coordinated examination of banks and their affiliated holding companies.

7.) The federal banking agencies should establish coordinated training programs for examiners involved in monitoring derivatives activities at dealer banks and end-users.

8.) Regulators should require specific written policies approved by the board of directors to be in place for dealers and end-users of derivatives setting prudential standards for management of the risks involved in derivative activities and establishing a framework for internal controls.

9.) Regulations or guidelines implementing § 132 of FDICIA should outline proper internal controls for derivatives activities at insured institutions.

10.) The federal banking agencies should define the failure of institution-affiliated parties to have adequate technical expertise to be engaged in derivatives activities, commensurate for the level of activity, as an "unsafe or unsound" banking practice, subject to civil money penalties or a corrective cease and desist order. If an insured institution suffers or will probably suffer a financial loss or other damage involving the willful or continuing disregard of such an unsafe or unsound banking practice, then appropriate institution-affiliated parties should be removed by the regulator.

11.) The federal banking agencies should work to enhance the current risk-based capital standards to include off-balance sheet instruments and activities not currently covered. The federal banking agencies should evaluate the need to potentially increase capital requirements associated with the "future credit component" or "add-on" component of the current risk based capital standards. In addition, the federal banking regulators should not implement proposals related to bi-lateral netting if such proposals have the effect of reducing capital standards for derivative activities without a clearly commensurate decrease in credit and legal risk.

12.) Regulators should set guidelines for the use of collateral by counterparties to derivatives transactions. Some market participants have negotiated contracts that require the posting of collateral if certain "triggering events" occur. In some cases, the triggering event is based on the size of exposure using market values; in other cases it may be based on the creditworthiness of the counterparty. Excessive reliance on such collateral triggers, particularly those based on creditworthiness, may be imprudent. In particular, such collateral arrangements could place substantial liquidity pressures on a counterparty just when its creditworthiness is weakening and its access to liquidity is more limited.

13.) In evaluating a firm's models and simulations for purposes of evaluating credit and market risk, the regulators should adopt capital, accounting and disclosure standards based on a 99% confidence interval (3 standard deviations).

14.) Call reports should be expanded to include enhanced information to assess market risks, concentration of counterparty exposures and the risk reducing effects of legally enforceable netting contracts. In addition, incremental information that would differentiate derivatives used for hedging purposes from other derivatives and that would identify the related impact of each category on bank earnings and balance sheets as well as any deferred hedging losses or gains could also be useful. Call report changes should be made in a manner designed to minimize any additional regulatory burden placed on insured institutions.

15.) Enhanced uniform disclosure standards should be established by the regulators for derivatives activities. These enhanced disclosures should include:

a.) Greater disclosure of the extent of derivatives activities by an institution, both on- and off-balance sheet, as well as additional numerical data regarding the types and maturities of various derivative instruments.

These disclosures would be beneficial to regulators and to the market.

b.) Disclosure to the regulators of individual revenue sources from derivatives activities.

c.) Disclosure of the level of speculative activity in derivatives conducted by dealers. While this form of disclosure may be difficult for some institutions under their current structure, it is currently available at certain dealers. There is no reason that trading activities cannot be broken down into component parts and that, for instance, customer trading services, institution hedging, and risk management activities cannot be segregated from speculative activities with these differentiations disclosed, at least to regulatory agencies.

16.) FASB and others responsible for setting accounting standards should, as a high priority, issue definitive guidance on reporting for financial instruments, including derivatives.

17.) Regulators and other standard-setting bodies need to provide clearer guidance on defining when risk management or hedge accounting is appropriate.

18.) Regulators should establish uniform guidelines as to an appropriate credit risk reserve that should be taken in conjunction with each transaction. While reserving for credit risk appears to be common among major derivatives dealers, it does not appear to be a uniform practice.

19.) Non-U.S. firms operating in this country should be subject to the same capital, accounting, disclosure and suitability requirements as U.S. firms.

20.) Regulators must adequately account for the legal risk related to non-U.S. counterparties. Regulators should ensure that institutions have adequate internal controls that take into account and set limits for legal risk. Higher capital requirements should be imposed in cases where the legal enforceability of agreements with counterparties is not certain.

21.) Regulators should work with industry groups to increase the standardization of documentation and the use of standard documents by all market participants. Increased standardization of documentation should decrease legal risk. In addition, as documentation becomes standardized, it will be easier for end-users to assess the risk/reward trade-offs of proposed derivative transactions.

22.) Regulators of financial firms marketing derivative products should insist upon high ethical standards in the sales practices of derivative units. The federal banking agencies should adopt uniform guidelines, similar to the OCC guidelines, requiring that a dealer bank should seek to understand the applicability of financial derivative instruments to the risks a bank-customer is attempting to manage. The bank dealer should be required to evaluate whether a particular transaction is appropriate for a particular customer. Proper due diligence in evaluating the appropriateness of a derivative product for a

prospective customer is the best safe-guard for both the dealer and the end-user. The regulators should also consider whether industry-wide suitability rules should be enacted and cross-industry guidelines enacted.

23.) Regulators should examine the merits of whether dealer disclosures as part of individual counterparty agreements should be significantly expanded and improved, particularly with regard to the specific costs and risks of derivative instruments in varying interest rate or other market change scenarios. Such disclosures could be made mandatory when dealers enter into transactions with customers, particularly less sophisticated end-users such as many smaller banks, thrifts, businesses and retail customers.

24.) The federal banking agencies should jointly promote and participate in educational programs related to derivatives so that potential end-users, particularly smaller institutions, may be better informed as to the risks and benefits of derivatives activities.

25.) The appropriate regulators should establish minimum prudential practices for municipalities and pension funds that may use derivatives. Taxpayers and pension fund participants may unknowingly be at risk from inappropriate investments in derivatives. Anecdotal evidence indicates that the level of expertise with derivatives exhibited by municipalities and pension funds is widely varying.

26.) Regulators should examine the need for enhanced disclosures to customers of the risks that may be involved with derivative products, including embedded securities, for mutual funds that are end-users of derivatives.

27.) The regulatory agencies should provide to Congress recommendations to conform the netting provisions contained in the Bankruptcy Code, FIRREA and FDICIA to a single standard for purposes of greater efficiency. Pursuant to the recommendation of the FDIC, any prospective legislation should expand record keeping requirements for QFCs at undercapitalized institutions. In addition, pursuant to the recommendation of the FED, federal funds transactions and spot contracts should be covered under the statutory scheme.

28.) Regulators should examine the need for regulations to protect against systemic risk. While the OCC has expressed reservations about such need, the SEC would appear to have a persuasive case in suggesting that regulation may be the only means of ensuring that systemic risk is adequately addressed by participants. As the SEC points out, there is no agreement among dealers and end-users on how to manage systemic risk. Since currently dealers and end-users have a competitive bias against factoring systemic risk into their individual risk calculations, it would appear that regulation is the only responsible method of achieving such an objective.

29.) The U.S. Treasury should evaluate the benefits of utilizing derivative instruments for hedging purposes to improve the efficiency of government financial management practices. Sovereigns around the world use derivatives for financial

risk management purposes.

30.) To the extent that the recommendations described above may not be implemented administratively, framework legislation outlining regulatory responsibilities without delineating specificity in standards setting may be necessary.

AGENCY RESPONSES

ATTACHMENTS

A. Federal Deposit Insurance Corporation Response

B. Office of Thrift Supervision Response

C. The Federal Reserve Response

D. The Office of the Comptroller of the Currency Response

E. The Securities and Exchange Commission Response

F. The Commodity Futures Trading Commission Response

ATTACHMENT A

Federal Deposit Insurance Corporation Response

FEDERAL DEPOSIT INSURANCE CORPORATION, Washington, DC 20429

OFFICE OF THE CHAIRMAN

October 1, 1993

Honorable James A. Leach
Ranking Minority Member
Committee on Banking,
Finance and Urban Development
House of Representatives
Washington, D.C. 20515

Dear Congressman Leach:

Thank you for your letter regarding the derivative product activities of insured financial institutions.

We are pleased to enclose staff responses to your enumerated questions. While derivative activities have a much broader applicability to the FDIC as insurer, this response in large part focuses on state non-member banks for which the FDIC is the primary regulator.

If you or your staff have any further questions, our Office of Legislative Affairs can be reached at 898-8730.

Sincerely,

Andrew C. Hove, Jr.
Acting Chairman

Enclosure

Financial Derivatives

Responses to Questions
Posed by:

Congressman James A. Leach, Ranking Member of the Committee on Banking, Finance and Urban Affairs

Federal Deposit Insurance Corporation

September 30, 1993

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SUMMARY

- The Federal Deposit Insurance Corporation (FDIC) recognizes that the size, complexity and dramatic growth of the market for financial derivatives demands increased regulatory scrutiny and concern.

- The global market for financial derivatives can and does provide substantial funding, liquidity, and risk management benefits to virtually all segments of the domestic and international economy, including insured financial institutions.

- Due to sometimes widely disparate legal, accounting and tax treatments accorded entities involved in this worldwide activity, significant work remains to be done in determining the accurate measurement and reporting of derivatives exposure for market participants.

- In response to the potential risk exposure to insured institutions resulting from increasing involvement in this expanding market, the FDIC continues to refine existing examination and supervisory guidance.

- So long as existing supervisory rules and guidelines can be broadly interpreted, are routinely updated, and are rigorously enforced, the FDIC believes that appropriate supervision and risk control over participation in the financial derivatives market by insured institutions can be achieved without significant additional regulations.

- The recently announced interagency task force will provide an additional forum for the FDIC, as primary regulator for state non-member banks and as insurer of financial institutions, to continue its efforts to thoroughly examine the risks and supervisory issues related to derivative activities.

INTRODUCTORY COMMENTS

Financial derivatives[1], also commonly known and referred to as derivative instruments, derivative products, financial contracts, and synthetics, are the most rapidly growing part of the world financial markets. Several large, federally insured, U.S. banks have been for years among the most visible and active participants in this market, and the growing acceptance and popularity of these instruments has led to the increased involvement by virtually every segment of the domestic economy, including smaller financial institutions. This marketplace has become increasingly important to the competitiveness of U.S. financial institutions, both from the standpoint of a source of revenue and as part of an efficient asset and liability strategy. Some of the largest individual participants in this market worldwide are the treasury or trading arms of U.S. commercial banks.

Besides being the fastest developing element of the global marketplace, financial derivatives are arguably the least well understood. The complexity of these instruments is largely the result of the pricing mechanisms and option features, which involve extensive mathematical modeling and value calculation formulas.

Broadly defined, a derivatives transaction is a contract whose value depends on ("derives" from) the value of an underlying asset, reference rate, or index.

Financial derivatives are those contracts which are principally designed to transfer price, interest rate and other market risks, without involving the actual holding or conveyance of balance sheet assets or liabilities. These instruments or contracts are generally stated or recognized in terms of a "notional value," an amount which is not carried on the balance sheet. The actual market value usually is a fractional portion of the notional value. Hence the common reference to "off" balance sheet instruments.

These instruments can be divided into categories based on the nature of the underlying assets or indices that determine the contract's value. Further, they are either

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[1] As requested, this response focuses on the market for financial derivatives. While collateralized mortgage securities products (commonly known as mortgage derivatives) are a well established part of the capital markets environment, these instruments tend to be carried "on balance sheet," i.e., are reflected as assets or liabilities on the published financial statements of the institution, and are not made part of this response.

considered "exchange traded" or "over-the-counter" (OTC) products, and generally fall into one of four categories:

- Interest rate contracts
- Foreign exchange contracts
- Equity contracts
- Commodity contracts

The bulk of all financial derivatives remain interest rate and foreign exchange contracts, with other products being forwards, futures, forward rate agreements, currency swaps, options, caps, and floors.[2] Although derivatives are becoming increasingly complex (for example contracts combining more than one of the four categories, multiple indices and characteristics of several different products), all synthetics can be viewed as an assemblage of forward agreements and options. Analysis of pricing and risk can then be evaluated much like any other financial product, in terms of the structure of anticipated cash flows, and expectations of future interest rates and economic conditions.

Phenomenal growth in this market, largely in the last five years, has resulted in outstanding contracts numbering in the millions and totalling trillions of dollars in notional principal. As summarized in Appendix II, calendar year 1992 saw growth in both the exchange traded and OTC markets. Use of all these instruments has greatly expanded as these products have developed and gained wide acceptance, and as volatility in the financial markets has increased.

As pointed out by the recently released study by the Group of Thirty (G30), by any measure, derivatives are a major financial activity. However, portrayal as a multi-trillion dollar market is somewhat deceptive, both in terms of activity and actual "dollars at risk." This is principally the result of the manner in which most of these contracts are constructed. Derivative instruments are assembled in terms of notional principal amounts, which are the underlying face amount on which some index, price movement, interest rate or multiple, acts in order to determine the actual cash flows to be paid or received. Notional principal amounts simply facilitate the calculation of the future cash flows. Different types of derivative instruments have different notional

[2] See Appendix I for a description of these and other terms.

principal amounts which often have little bearing on the actual potential for price movements and changes in cash flows.

Growth in exchange traded derivative instruments has been driven by the need for liquidity enhancing innovations, while the growth in OTC derivatives has been the result of a desire for market risk transferring devices. Financial institutions and other businesses have found increasing need to alter their exposure to price and interest rate movements both quickly and cheaply in response to the rapidly changing global market environments.

Market risk was principally introduced by economic volatility, as well as regulatory changes which heightened and revealed the dangers of rising and falling interest rates. With the advent of risk based capital, derivatives have become one of the most cost effective methods for adjusting balance sheet interest rate risk (IRR). The general increase in corporate leverage over the last decade has also resulted in additional derivative product use to manage funding risks associated with longer maturities.

The FDIC continues to believe that the appropriate monitoring, examination, and supervision of financial derivative activities engaged in by insured institutions, is of the highest priority. The FDIC recognizes the significant risk exposure to insured financial institutions presented by involvement in this rapidly changing and largely unregulated market, and continues to work on refining examination guidance. Work in this area includes but is not limited to, cooperation with both foreign and domestic financial institution regulators on issues ranging from capital requirements, accounting standards, and contract language; implementation of constantly updated examination guidance; and education of relevant personnel to the nature and risks of the derivatives marketplace.

For the purposes of this response, the principal focus is the extent and degree of involvement by state non-member banks for which the FDIC is the primary regulator. However, the FDIC studies and monitors derivative activities throughout the banking industry. Considering the explosive growth of the market, the volume of activity at all insured institutions, and the as yet unquantified systemic risk, these activities have importance to the FDIC as insurer of all financial institutions.

INDIVIDUAL RESPONSES

Relevant documentation and supporting information are found in the attached appendices.

Question 1. To supplement the discussion on "Supervision and Regulation of Derivatives" contained in Section III of the January 27, 1993 report issued jointly by the Federal Reserve, the FDIC, and the OCC entitled Derivative Product Activities of Commercial Banks (" Joint Report"), please address the following:

Question 1a. In general, please summarize and provide the written policies and procedures currently used by your agency to regulate and monitor derivative activities of the institutions under your supervision. Also, please provide a summary of your regulatory authority over derivative transactions.[3]

1a. Written policies and procedures are presently embodied in the Capital Markets Reference Manual (relevant sections and summary are attached as Appendix III). This represents a compilation of the formal written guidance used as the basis for FDIC examination and supervision of all capital markets activities, including those related to financial derivatives. As such, it is constantly being updated and revised as necessary to reflect this constantly evolving market. Relevant Examination and Policy Memoranda, applicable accounting literature, and discussion of current market trends and conditions are all incorporated as part of the manual.

The Division of Supervision (DOS) of the FDIC has allocated substantial resources to selecting and training individuals for specific involvement in the examination and supervision of capital markets activities. These individuals, currently numbering 28, are located in the eight DOS Regions with particular

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[3] **The written policies and procedures requested should include those documents used in the examination process to assess, among other things, an institution's infrastructure for measuring and controlling risk, to assess an institution's front- and back-office processing regarding the pricing and valuation of derivative portfolios, and to require troubled institutions to minimize their existing risk and limit the size of new off-balance sheet activity. The documents should also include those which describe capital requirements as they relate to derivative activities. In addition, the documents should include those which define reporting requirements regarding derivative activities in Call Reports and Y-9C reports. The Joint Report mentioned that examiners have received considerable training and guidance aimed at off-balance sheet activities and have attended special courses and seminars addressing this issue. Materials provided as part of such training would also be helpful.**

concentration in areas where insured financial institutions are most likely to utilize or encounter derivative instruments. In addition, the FDIC regularly compiles and internally produces reports on regional capital markets activities.

The training of specialists is ongoing. Semiannual seminars are conducted covering topical and emerging issues in an attempt to evolve with the market. Reference materials prepared and distributed for these seminars contain the most recent information related to the covered subjects and are viewed as interim examination guidance. (Applicable portions of these materials are also attached as part of Appendix III.) Training of other examiners and appropriate Regional Office personnel is then periodically conducted by the capital markets specialists within the Regions.

The FDIC's authority over derivative transactions can be found in several places in the Federal Deposit Insurance Act (FDI Act) and its implementing regulations. This authority exists in both the open and closed bank context.

For open banks, the FDIC can regulate derivative transactions pursuant to its general authority to assure that banks do not engage in unsafe or unsound practices. FDI Act §8(b). More specifically, Appendix A to the FDIC's Capital Maintenance regulation discusses the effect that the netting of certain derivatives may have on a bank's risk-based capital computation. 12 C.F.R. 325, Appendix A, §II(E).

In the closed bank context, section 11(e)(8) of the FDI Act defines the term "Qualified Financial Contract" (QFCs) and sets forth certain parameters for handling QFCs when the FDIC is appointed receiver. The FDIC Board of Directors issued a Statement of Policy on Qualified Financial Contracts dated December 12, 1989 interpreting this section of the FDI Act. FDIC Law, Regulations & Related Acts, Volume 2, p. 5113.[4] This section of the FDI Act applies only if the derivative in question is a QFC. (The term "derivative" is broader in scope than the term "qualified financial contract.")

Question 1b. The Joint Report mentions that reporting requirements disclose the notional values of certain derivatives only, and therefore do not address the institution's actual exposures which may average approximately 2%-8% of the

[4] Sections 11(e)(1) and 13(e) of the FDI Act, the FDIC Board's March 23, 1993 "Statement of Policy Regarding Treatment of Security Interests After Appointment of the Federal Deposit Insurance Corporation As Conservator Or Receiver", and FDIC Legal Division Staff Advisory Opinion 89-48 may also be relevant to any discussion of the FDIC's authority to regulate derivative transactions.

notional amount. What suggestions do you have for changing the reporting requirements to reflect actual exposures from derivative activities, including, but not limited to, credit exposure and market exposure? Do you feel any changes are needed?

1b. The FDIC does not consider it necessary or desirable to significantly change current financial derivatives reporting based on notional principal amounts because:

- Notional values give a measurable and consistent indication of the volume of activity for both individual institutions and industries.

- Other risk exposure (both credit and market) measurements fluctuate with rate changes and provide in and of themselves, no reliable or consistent indication of the potential for future exposure.

- As the average range of exposure varies over time (as measured by historical loss rates for example), it is easier for off-site analysts, including regulators and central banks, to estimate overall industry trends and potential risk.

- The current reporting basis makes it more difficult for institutions to under-report their actual exposure by manipulating the complex value-calculation models. While notional principal reporting does not necessarily prevent inaccurate credit risk disclosures, comparison to peer group information should preclude stating negligible risk totals on large portfolios of financial derivatives, and also should reveal approximate market risk positions.

- The present approach affords a simpler basis for on site examinations.

So long as all participants in, and regulators of, these markets understand that the notional principal values do not reflect actual credit or market exposure amounts, the current reporting approach need not be radically altered. Other methods for reporting the level of exposure or market volume, tend to provide information relevant only to the particular institution and only for a specific point in time. It is the FDIC's opinion that information provided in a consistent manner by all reporting institutions is more valuable for supervisory and regulatory purposes, and is also less subject to manipulation on an individual basis.

Question 1c. The Joint Report states that ". . . some reporting changes are under consideration. In particular, agency staff is reviewing the extent to which bilateral netting arrangements should be reflected in the reporting of replacement cost exposures. In addition, current efforts on interest rate risk in response to Section 305 of FDICIA will require increased disclosure of derivative exposures, and Section 308 requires banks to establish standards to evaluate their exposures to weak institutions, including those arising from derivative products."

Please provide a detailed update on these and other reporting changes currently under consideration by your agency.

1c. With respect to risk-based capital standards for interest rate risk, the FDIC, the Federal Reserve Board, and the Office of the Comptroller of the Currency jointly published a proposed rule on September 14, 1993, that would implement the portion of Section 305 of the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) that requires the agencies to ensure that these standards take adequate account of this risk.[5] The agencies will be proposing that an interest rate risk schedule be incorporated into the current Report of Condition and Income (Call Report). The proposal envisions that there would be revisions to the Call Report to permit the Agencies to collect the information necessary to monitor the level of interest rate risk and assess the need for additional capital at banks that may have significant exposures to interest rate risk. A proposed reporting exemption would be granted to institutions meeting contract volume and maturity criteria. Non-exempt institutions and FDIC insured savings banks would be required to complete the proposed schedule.

This proposed interest rate risk schedule would require additional reporting of off-balance sheet positions. These positions would be distributed among seven maturity ranges or time bands and segregated into three categories. The three categories would consist of: those positions representing firm commitments (e.g., swaps, futures and forward-rate agreements); those positions exhibiting option characteristics (e.g., options, caps, floors and swaptions); and those commitments or derivative instruments whose value depends on the value of an underlying asset or index with amortizing characteristics.

Specifically, off-balance sheet instruments would be reported in a manner which reflects their impact on the institution's overall interest rate risk position. To

[5] See 58 Federal Register 48206. The comment period ends on October 29, 1993.

accomplish this, these instruments, in general, would be reported using their notional principal amount in two offsetting entries. For example, to represent an interest rate swap, it is proposed that the notional principal amount of a swap would be reported once at the swap's maturity and again as an offsetting entry at the next repricing of the floating side of the swap.

In addition to completing the proposed interest rate risk schedule, some non-exempt institutions may choose, subject to examiner approval, to report the results of their own internal models. When this occurs, an institution would report its estimate of the change in present value of its off-balance sheet instruments under both a rising and falling rate scenario.

The Call Report instructions generally prohibit banks from offsetting or otherwise netting any assets and liabilities when preparing the report. However, the Statement of Financial Accounting Standards Interpretation No. 39 (FASB 39) which takes effect for financial statements issued for periods beginning after December 15, 1993, permits entities to offset fair value amounts recognized for derivative contracts executed with the same counterparty under a master netting arrangement. An entity's decision to offset or not to offset under these arrangements must be applied consistently. The agencies plan to revise the Call Report instructions to allow banks to apply the offsetting provisions of Interpretation No. 39 that are applicable to derivatives.

The Federal Reserve Board is given responsibility under section 308 of FDICIA for regulations addressing interbank liabilities.

Question 2. Please discuss in detail capital requirements, both current and proposed, as they relate to derivative activities of institutions regulated by your agency. Do you feel the current capital standards are adequate?

2. The Federal Reserve Board is given responsibility under section 308 of FDICIA for regulations addressing interbank liabilities.

Current capital requirements for institutions regulated by the FDIC, are embodied in Part 325 of the Rules and Regulations; specifically Appendix A which details the risk based capital calculations.

For Capital Adequacy purposes, derivative products are divided into two categories: Interest Rate Related Contracts, and Foreign Exchange Rate Related Contracts. The two categories are as follows:

Interest Rate Related Contracts:

- Single Currency Interest Rate Swaps
- Basis Swaps
- Forward Rate Agreements
- Interest Rate Options purchased (Caps, Floors, Collars)
- Other instruments with similar credit risks

Foreign Exchange Rate Related Contracts:

- Cross Currency Interest Rate Swaps
- Forward Foreign Exchange Contracts
- Currency Options purchased
- Other instruments with similar credit risks

Banks must calculate the Credit Equivalent Amount for all of the above types of contracts, and assign the Credit Equivalent Amount to the appropriate risk weight category, based on the identity of the obligor or nature of the collateral. However, the maximum risk weight is the 50% category. The formula for determining the Credit Equivalent Amount is:

Present Credit Exposure + Potential Future Credit Exposure,

where

Present Credit Exposure is the Mark-to-Market amount, with negative values equal to zero, and

Potential Future Credit Exposure is the Notional Amount x the Credit Conversion Factor

The Credit Conversion Factor is determined by the following chart:

Remaining Maturity	Interest Rate Contracts	Foreign Exchange Rate Contracts
One Year or less	0%	1.0%
More than One Year	0.5%	5.0%

Foreign exchange rate and commodity contracts with an original maturity of 14 calendar days or less and interest rate, foreign exchange rate, commodity contracts traded on exchanges that require daily payment of variation margin are not covered by the risk-based capital guidelines. Proposed new capital requirements for off balance sheet instruments and activities are being discussed on both an interagency and international basis, but resolution may not be possible in advance of the determination of an appropriate interest rate risk capital component.

Currently, the staff of the FDIC is working, in conjunction with other regulatory agencies, on proposed changes to the capital standards which would have the effect of recognizing bilateral netting, when it is legally enforceable, as a basis for computing the appropriate capital levels for derivative products. In addition, we anticipate working in conjunction with certain international organizations to study the need to potentially increase capital requirements associated with the future credit exposure component discussed above. As discussed above, the current capital standards need some refining and improvement.

Question 3. Please discuss which types of derivative instruments institutions under your jurisdiction are, and are not, permitted to utilize. Please distinguish between the types of derivatives institutions are, and are not, permitted to utilize for different functions, including trading for customer accounts, trading (revenue) for their own accounts, and hedging for their own accounts. Please indicate the relative use of different derivative instruments by such institutions. In addition, please indicate the relative use of derivatives by such institutions for the different functions mentioned above.

3. Section 24 of the FDI Act regulates the permissible activities of state non-member banks by utilizing the same standards that apply to national banks. Prior to the enactment of this section, a state bank's powers were controlled primarily by state law and the Glass-Stegall Act. Section 24 does contain a grandfather provision for certain activities which the bank was conducting prior to its enactment. Under Section 24 certain types of "investments" are prohibited for state non-member banks. For example, state banks are generally not permitted to invest in equity securities. See FDI Act §24; 12 C.F.R. 362; "Equity Investments Permissible for National Banks and Activities Permissible for National Banks and Their Subsidiaries," FDIC Publication, May 1993; FDI Act §18(l). This prohibition would appear to include stock options. With regard to the purchasing of commodity futures for its own account, it is unclear whether or not this is a permissible activity. A transaction which violates a

criminal statute, an applicable State statute, is inherently unsafe and unsound, or violates section 30 of the FDI Act pertaining to Adverse Contracts, would be prohibited.

State non-member banks are primarily end users of derivatives, usually in the context of a hedging or portfolio management strategy. Even though, aside from individual State statutes, there are no legal prohibitions on trading for their own account by state non-member banks, the size and technical expertise of such institutions generally make this activity impractical. The FDIC would generally be very skeptical of active trading in any of the derivatives markets unless management could convincingly demonstrate both sufficient capitalization and sophisticated technical capabilities commensurate with such involvement. State non-member banks are also unlikely to be active in the utilization of derivative instruments on behalf of customers. Customers sufficiently large and sophisticated enough to be involved in such activity would generally transact such business with larger institutions.

Relative to the money center banks, the use of derivatives by state non-member banks is comparatively slight. At one point as much as 98% of all bank derivative activity by volume, was concentrated in the largest banks and bank holding companies. Virtually all domestic bank dealer activity continues to occur in a handful of money center banks.

Question 4. **Please discuss the benefits that may be realized from utilizing derivative instruments, such as using them for risk management and asset-liability management purposes.**

Could the development and use of derivative products by savings and loans (S&Ls) and others have helped to prevent the S&L crisis? For example, could the use of interest rate swaps by S&Ls have helped them to sufficiently control duration and interest-rate mismatches? (Especially mismatches due to long-term mortgage assets yielding low interest rates being combined with short-term liabilities commanding high interest rates.)

4. The principal uses for financial derivatives are as risk management tools, to gain access to advantageous funding, and as a source of revenue. From a risk management perspective, when used prudently, derivatives can offer managers efficient and effective methods for reducing certain risks through hedging. Generally, hedging is the process of taking a position in an instrument that produces a price movement which is opposite to that of an existing or anticipated position, with the goal of protecting that existing or anticipated

position against loss due to fluctuations in prices, interest rates or exchange rates. The two principal approaches are: option strategies, which attempt to protect against adverse market movements while leaving open the possibility of capitalizing on favorable movements; and forward strategies, which attempt to lock in a specific rate or yield over a given time frame by eliminating interest rate or currency risk.

Derivatives may also be used to alter the payment or maturity structure of available funding sources to more closely match those of a desired but unavailable source. Conversion of a floating rate funding source to a more predictable fixed rate, or the creation of a lower cost floating rate debt instrument from a fixed rate one are examples of what can be accomplished by using financial derivatives. The application of these principles can allow for the efficient restructuring of the balance sheet.

Derivatives can also generate substantial revenue through trading activities, specifically by "market-making," speculation, and risk arbitrage. Market-makers (also known as dealers) enter into transactions with customers and other market participants, seeking to profit by maintaining a generally balanced portfolio from which they expect to earn a bid/offer spread. Speculators hope to profit by accepting the risk that stems from taking outright, unmatched positions in anticipation of price movements. These are the risks which offer the opportunity for the largest gains as well as the possibility of commensurate losses. Arbitrage traders also attempt to take advantage of price movements, but focus their efforts on trying to profit from small discrepancies in price among similar instruments in different markets. By simultaneously buying and selling these related instruments, they seek to capitalize on market inefficiencies while minimizing price risk.

Although the use of financial derivatives was not particularly widespread in the Savings and Loan industry by the time the FDIC became involved in 1989, many of these instruments were in existence throughout the last decade. Some institutions did use them; many used them properly; and in those instances, duration mismatches and interest rate risk were often effectively reduced. The wider use of such instruments could have enabled improved profitability in some thrifts. However, whether this would have been universally beneficial would have been largely dependent on appropriate application, and therefore, far from certain.

Question 5a. What are your primary regulatory concerns regarding derivative activities of institutions supervised by your agency?

5a. The primary regulatory concerns of the FDIC are as follows:

- Accurate and consistent determination of risk exposure. The ability to suitably measure both credit and market risk exposure for individual institutions and for groups of institutions, is perhaps the single most important consideration for supervisory purposes. This determination is the starting point for both on and off-site examinations, and provides the ability to generate essential industry data.

- The rate at which risk exposure can accumulate in a given institution. For both exchange traded and OTC instruments, an institution can, for comparatively small cash outlays, accumulate large unbalanced positions committing it to large future negative cash flows. Moreover, with OTC products, these institutions could later find that exiting these contracts is much more costly than entry.

- Management comprehension of the risks. What is most important is that the board of directors and management responsible for setting overall risk parameters fully comprehend these risks. A principal focus of any FDIC examination of derivatives, is to ensure that executive management and the board of directors have been suitably informed and made to appreciate the range of risks presented by involvement in these activities.

- Maintenance of sufficient capital reflecting off balance sheet risk.

- The particular vulnerability of smaller institutions to speculative inducement and pressures. The proliferation of derivative products and related advisory services, has resulted in instances where management supervision and/or stewardship by directors has been abdicated in favor of undue reliance on the trading acumen of various brokers, dealers or consultants. The lack of appropriate technical knowledge on the part of management, in conjunction with a paucity of relevant disclosures, is an environment fraught with such risk.

Question 5b. Do you believe that any fundamental changes in the current regulatory framework for institutions using financial derivatives is needed at this time?

5b. Joint bank regulatory examinations for major derivative dealers (banks and bank holding companies) could provide substantive benefits to all three agencies.

These dealers are the source of much of the activity in the industry and analysis at this level would permit the best assessment of the overall risk to the entire universe of insured institutions.

Regulation and supervision of banks and bank holding companies involved in financial derivatives activities, can and should continue to be effectively conducted largely through the existing framework of bank regulations, policy, and examination practice, with enforcement by means of a broad interpretation of these present guidelines.

Afforded the flexibility to internally and cooperatively adjust current regulations concurrent with the evolution of the derivatives marketplace, the banking agencies should be able to appropriately address foreseeable supervisory concerns. As part of this cooperative effort, the FDIC will participate in an interagency task force which will review the risks and supervisory issues.

Question 6. Is there adequate coordination between U.S. and foreign regulators to regulate risks associated with derivatives? Does the BIS report of April 1993 address all of your agency's concerns in this area?

6. Although progress in resolving the variety of issues involved in the derivative marketplace has been gradual, cooperation between U.S. and foreign regulators in this area has been all that can reasonably be expected. The BIS report of April 1993 did address two critical areas of concern -- the legal, accounting and supervisory recognition of netting of outstanding derivative contracts and the effect on capital adequacy calculations -- but left the issues of the future exposure capital component and dealer disclosures to be addressed in the near future.

Question 7. Individual derivative contracts, taken by themselves, include elements of risk. However, derivatives, when evaluated as part of an institution's entire portfolio, are often used to offset and reduce the overall risk exposure of an institution. How do your regulatory actions, including capital and accounting standards, take into account the use of derivatives to reduce the overall risk exposure of an institution? For the purpose of regulation, how does your agency distinguish between derivatives used to hedge and reduce overall risk, such as many over-the-counter (OTC) contracts, and derivatives used for trading and other purposes, such as many exchange-traded contracts?

7. Examination and supervisory treatment by the FDIC is not predicated on the basis of these instruments being OTC or exchange traded. For example, speculative positions may be taken in swaps, and hedging is routinely performed in the exchange traded futures market. Regulatory action is based more on the manner of use of derivative instruments by an individual institution, the overall financial condition of the company, the quality of internal controls, and the specific technical competence of management.

   Different examination and regulatory treatment is accorded to institutions which can clearly demonstrate the use of these instruments as part of a comprehensive risk reduction strategy, and those which are dealing, trading or otherwise taking an unmatched position in derivatives. Accounting and regulatory reporting treatment is determined by the manner of use, with deferral (hedge) accounting generally permitted in conjunction with a risk reduction strategy, but mark-to-market or lower of cost or market (LOCOM) accounting required for all other uses of derivatives.

   The overall financial condition of the individual institution is important in that otherwise sound, well capitalized and appropriately managed institutions, are generally allowed to engage in derivatives activities outside of a risk reduction strategy. The financial strength, size, liquidity and control environment of the institution will further determine the extent to which involvement in derivative activities is acceptable. Institutions with more modest capital levels, for example, could be discouraged on safety and soundness grounds from taking the same level of unmatched positions.

   Even if an individual institution is financially capable and is attempting to use these instruments as part of a risk reduction strategy, the FDIC could determine that involvement in derivative product activities would be "unsafe and unsound" based entirely on the specific technical inability of existing management. This could be the case even in institutions which are in other respects considered appropriately managed, or where present management is already engaged in a more limited use of certain derivatives.

Question 8. **Recently published reports on derivatives activities, such as the July 1993 Group of Thirty report entitled Derivatives: Practices and Principles and the May 1993 Institute of International Finance, Inc. (IIF) report entitled An Integrated Regulatory Approach to Derivatives Activities stress the importance of internal controls over regulation in many areas. However, the Group of Thirty report has been criticized by some for relying too heavily on industry self-regulation.**

Question 8a. Regarding banks, the IIF report states, for example, that banks themselves should develop trading and credit policies that set their own risk limits. Do you think that such maximum risk limits should be set by institutions or by regulators?

8a. The FDIC does not, as a matter of policy or practice, seek to mandate the degree or level of risk assumed by sound, appropriately capitalized, well managed financial institutions. Moreover, when such risk limits are imposed on troubled institutions or institutions warranting heightened regulatory concern, the determination is made on a case by case basis.

The FDIC does however, seek to require sufficient Tier 1 capital, reserves, internal controls and management expertise commensurate with the level of risk inherent in any portfolio or activity both on and off balance sheet.

Question 8b. In general, to what extent, in what areas, do you think regulators should rely on internal controls versus regulatory requirements?

8b. In the review of internal controls for present safety and soundness examinations, much reliance is placed on the work of external and internal auditors. In larger banks, external audits of control procedures rest on audit work performed internally. Internal and external audits, when performed in this area, are generally considered reliable and following review, have been largely accepted by the on-site examinations. Internal controls and related procedures for derivative product activities are often unique to the individual institution and should be a part of a well considered policy approved by the institution's board of directors. Review of the policy and actual practice, with criticism as necessary, may be more effective and less burdensome than a predetermined set of regulatory requirements. The FDIC would agree that additional regulation in this area would not replace competent management and appropriate systems for reducing operational risks.

Question 8c. Do you feel that any of the "Recommendations for Dealers and End-Users" contained in the Group of Thirty report (Recommendations 1-20) should be formally mandated by regulation? Please comment on the different issues addressed in the recommendations with specificity.

8c. The recommendations contained in the Group of Thirty Study (Study) are divided into two parts. The first 20 recommendations are directed at the industry itself. The last four are directed at regulators, supervisors and

accountants. The second part of these recommendations is addressed in your question #9.

The first 20 recommendations cover general policies and guidelines, valuation of market risk, management of credit risk, systems and internal controls, and disclosure. While the Study provides a good general overview of appropriate conduct of derivatives activity, there is little which would suggest a recommendation for tightening of standards or requirements.

While most of the Study could be adopted as general supervisory guidance, there would be little benefit to incorporating these as regulatory mandates. In fact, should these recommendations be codified by regulation, the general lack of originality and specificity in the Study, may actually hinder effective supervision by encouraging adoption by the industry of minimal standards.

With two possible exceptions, nothing in this portion of the Study directly contradicts existing FDIC policy or examination practice. The exceptions are: (1) the recommendations for quantification, by individual institutions, of market risk using probability analysis, if this is intended to replace the present agreed upon regulatory standard of "add-ons"; and (2) the recommendation encouraging unlimited two way payments as part of a broader use of bilateral netting.

Following is a review of the individual recommendations for the Group of Thirty Study:

(1) Recommends involvement, supervision and oversight at the highest levels of the board of directors and management. The FDIC would fully concur. Such stewardship at the policy level would be expected, reviewed and enforced as part of the existing safety and soundness examination assessment of management.

To be more specific, the FDIC would expect to see reflected in the board minutes, a full discussion of the costs, benefits, and especially the risks of an institution's planned or ongoing involvement in derivative activities, much the same way as for any new business venture. Appropriate management personnel should prepare an executive document in language suitable for the technical knowledge and awareness of the full board. This document should detail the exact nature of the planned involvement and the levels of risk that can be incurred. Risk parameters should be expressed in terms of most likely and worst case

scenarios, with specific board and management approvals for these levels clearly enumerated.

(2) Recommends mark-to-market accounting for dealer and trading portfolios. The FDIC fully concurs. Existing accounting literature, memoranda, and examination practice requires this treatment for these uses of derivatives.

At present, the Call Report Instructions provide that all written standby contracts and other option arrangements shall be valued at lower of cost or market (LOCOM), not mark-to-market.

(3) Recommends determination of value by marking to mid-market. Inasmuch as mid-market accounting provides a more accurate and conservative value, this is appropriate. However, even with implicit adjustments for credit spread, these marks should not be used to substitute for, or reduce, required capital levels. Especially if credit risk adjustments are not on an individual transaction or "derivative only" basis. "Portfolio" or "all customer activity" bases could result in smaller mark-to-market adjustments and possibly lower capital requirements.

While a mark to mid-market approach may be generally appropriate for dealer banks, this same treatment may not be accurate for end-users. The latter, which include most state non-member banks, would not normally have access to the lowest possible replacement cost or best available sale price. This is particularly true of OTC instruments which have only limited liquidity in any event, and in some cases may only be unwound through the original dealer. The most accurate accounting treatment in these instances would be the least favorable (bid side) of the bid-ask spread.

(4) Recommends identification of revenue sources as a means to analyze sources of risk. While a useful analytical tool, this methodology tends to be complex and fraught with subjective interpretations. If this process is not performed in sufficient detail, the results may well be misleading at best, wrong at worst. As the principal risk analytic, this approach is probably neither meaningful or appropriate for state non-member banks.

(5) Recommends measuring a wide variety of market risks using probability analysis, and expressed in terms of the expected loss from an adverse market movement. This methodology is widely used for determining

certain components of off balance sheet risk. This is particularly true of both traded and embedded options, but it is applicable for all instruments where volatility is a significant component of market risk.

The recommendation proposes that a single common denominator be distilled from all components of risk for a one day exposure. While making calculation easier, this blending of risks may not reveal the existence of more severe individual risks. While the FDIC does not require the utilization of worst case estimations for capital adequacy purposes, it is important to identify these outlying risks. This recommendation does recognize that option portfolios are difficult to evaluate on a probability theory basis, and should instead utilize "more likely / less likely case" analyses.

(6) Recommends the use of stress testing as an analytical tool. The FDIC fully concurs. However, this recommendation does not suggest reflecting the results in the measurement of market risk as proposed in item 5. For example, end users of derivatives would be likely to reflect this stress testing as part of the various interest rate risk scenarios.

(7) Recommends that dealers periodically forecast the cash flow and funding requirements of derivative portfolios. The FDIC fully concurs. A suitably detailed analysis of earnings and liquidity should reflect such forecasts, and is scrutinized under existing examination procedures and practices.

(8) Recommends that risk management should be independent of the deal-making function. The FDIC fully concurs, and enforces this practice as part of existing examination procedure.

(9) Recommends that end-users adopt practices and guidelines similar to dealers, as appropriate to size and complexity. The FDIC concurs. The codicil, in addition to size and complexity, capital levels, management ability, and control environments, can vary significantly between institutions and can also mandate different use of these and other guidelines.

(10) The first part of this recommendation, which discusses the use of current exposure (market value) as a portion of the credit risk calculation, is a recitation of existing industry practice already fully accepted by the regulatory and accounting authorities. However, the second part

recommends that potential exposure, the estimate of future replacement cost of transactions, be calculated using probability analysis. Probability analysis provides the statistical framework of the future exposure component incorporated in the existing risk based capital guidelines. The FDIC concurs that the application of this methodology is useful and appropriate. However, the Study also seems to suggest that individual institutions could use this analytical approach to supplant the current standardized calculation for the future exposure component of the off balance sheet capital charge. The statistical information and underlying assumptions used by individual institutions in probability models have been found to vary significantly; providing an uncertain framework for acceptable risk based capital allocation. Existing regulatory capital requirements mandate the use of a standardized add-on risk based capital component based on percentages of notional principal. The FDIC would object to the recommendations if its intended application results in attempts by individual institutions to unilaterally lessen the amount of required capital currently imposed on them by the standardized "add-ons".

(11) Discussion of aggregation of credit exposure. This item touches on the subject of netting but makes no substantive recommendation.

(12) Recommends independent credit risk management. The FDIC fully concurs. This item is largely a recitation of current industry practice.

(13) Recommends the broader use of master agreements, and specifically cross product agreements, but is not specific as to operational or accounting details. Also encourages full two way payments to benefit from the use of cross product agreements.

The broader use of master agreements is not considered objectionable, nor in theory is the adoption of cross product agreements. However, wider use of bilateral netting, if permitted by the agencies, does not imply the acceptability of full two way payments. While included in the standard language of the International Swap and Derivatives Association's (ISDA) Master Agreements, the concept of two way payments is not always consistent with existing bankruptcy and banking laws which provide for the repudiation of derivative contracts by the receiver under certain conditions. The FDIC is specifically permitted under FIRREA to selectively accept or repudiate "qualified financial contracts" (with certain constraints), including certain derivative

instruments, in a failing bank resolution. The purpose of the Study recommendation, is clearly the more efficient conduct of derivative activities, but in our view, this relieves institutions from some of the responsibility for detailed individual credit analysis. The possibility that full two way payments could be interrupted by a bankruptcy or other severe default event, injects a necessary element of market discipline into the system and adds an important layer of protection for the insurance fund.

(14) Recommends the use of credit enhancements when appropriate. This is already an industry practice, with which the FDIC concurs.

(15) Recommends that the industry promote uniform enforceability, but provides no substantive suggestions. The uniform enforcement of contracts is of particular importance to the financial derivatives marketplace, but requires the consistent institution, application and interpretation of commercial statutes. The complex international environment with regard to legal enforcement and business practice, makes this recommendation extremely challenging.

(16) Recommends that only professionals with suitable expertise, technical knowledge and experience be permitted to conduct and supervise derivative activity. The FDIC fully concurs for dealers. For end-users, senior management should, at minimum, possess sufficient expertise and technical knowledge to fully understand the specific activities undertaken by their institutions. In this context, senior management of these end-users may benefit more from increased disclosure of costs and risks as provided by dealers than from hiring additional in-house expertise or consultative "derivative professionals."

(17) Recommends appropriate investment be made in suitably sophisticated systems. The FDIC fully concurs.

(18) Recommends that the board of directors and executive management of the institution specifically designate authority to conduct derivative transactions. The FDIC fully concurs.

(19) Recommends international harmonization of accounting standards for derivatives. The FDIC agrees that is desirable, although this goal appears far from realization at this time.

Specific recommendations for harmonization of accounting standards include dealer and trading portfolio mark-to-market accounting, and end-user reflection of deferral accounting for risk management. This represents no change from current policy and practice. Relevant accounting guidance is largely embodied in the following pronouncements: (FASB 80) and in Emerging Issues Task Force (EITF) 84-7 and 84-36.

Although the FDIC concurs that dealers should generally be accorded mark-to-market treatment, written option contracts, including those by dealers, are on a lower of cost or market basis (LOCOM) rather than market basis for Call Report purposes. The agencies would need to consider whether to change to market value for dealer written options for Call Report purposes.

End-users utilizing derivatives to manage balance sheet risks should account for derivatives in a manner which creates consistent income recognition with the nature of the risks being managed. Generally, the FDIC has promoted and enforced asset and liability policies which result in risk reduction as part of an institution's strategy in a situation where derivatives are utilized. As the Study notes, the key is defining when risk-management accounting is appropriate. For Call Report treatment, futures, forwards, and written options, even those used for risk reduction do not qualify for deferral accounting but must either be marked-to-market or lower of cost or market (LOCOM). In contrast, because the Call Report Instructions do not specifically address interest rate swaps used to reduce the risk of items carried at cost, these instruments in most instances are permitted deferral accounting treatment.

The banking agencies have long had concerns about the deferral of losses on future, forwards, and written options, especially long-term deferrals. As permitted by section 121 of FDICIA, and based on safety and soundness concerns, the agencies have continued to require reporting of losses on a cash basis.

The FASB is still working on developing consistent and specific accounting standards for hedging activities, but it may still be some time before these are adopted. The issues of anticipatory hedges and whether derivatives must be used for risk reduction or risk management purposes by end-users in order to qualify for hedge accounting have been contentious.

With regard to netting of amounts due to and from counterparties, the Call Report Instructions prohibit netting (offsetting of amounts due to and from counterparties) except where specifically permitted, normally by novation. This principally addresses the netting of current exposures and notional principal amounts, to determine credit risk and risk-based capital requirements. With respect to the periodic cash flows under derivative contracts, such as those under interest rate swaps, most institutions are probably reporting net and the agencies have not taken exception to that practice.

(20) Recommends disclosures covering: management's attitude and approach to financial risk; accounting policies; analysis of positions at financial statement date; credit risk; and the extent of derivatives activity. These items, particularly the last specific disclosure, would be beneficial to all users of derivatives. However, the recommendation is not sufficiently detailed to provide an exacting standard. This is considered the area of the Study for which further regulatory guidance may well be suitable.

The recommended financial statement disclosures under GAAP are reasonable. Although the current standards do not comprehensively cover derivative activities, prevalent practice has developed in a manner that is generally consistent with the disclosure recommendations made by the G30. The disclosure requirements for off-balance sheet financial instruments established by FASB 105 cover a portion of these recommendations. While there is some concern relative to reporting burden, particularly for smaller institutions, it is unlikely that the agencies would request this type of narrative discussion in the quarterly Call Reports. It is more likely that such information would continue to be required at on-site examinations. However, additional numerical data regarding the types and maturities of various derivative instruments would be valuable.

The disclosure of market risk is not specifically addressed in this recommendation, probably because it is very difficult to quantify. An understanding of management's attitude toward financial risks and how derivative instruments are being used in the context of this environment, is an acceptable proxy. Appropriate disclosure of market risk could also be gleaned from the interest rate risk position of the institution, adjusted for various stress test levels, and incorporated into existing interest rate risk reporting requirements.

Although also not specifically mentioned in this recommendation or anywhere else in the Study, dealer disclosures as part of individual counterparty agreements should be significantly expanded and improved. Particularly with regard to the specific costs and risks of derivative instruments in varying interest rate or other market change scenarios. The FDIC recommends that such disclosures be made mandatory when dealers enter into transactions with non-registered broker-dealers. This would encompass the majority of less sophisticated end-users such as many smaller banks, thrifts, businesses and retail customers.

Question 9. Please comment on the four "Recommendations for Legislators, Regulators, and Supervisors" contained in the July 1993 Group of Thirty report (Recommendation 21-24) as they are relevant to your agency. Please comment on each recommendation separately.

9. The Group of Thirty reserved their most exacting recommendations for the regulatory, government and accounting establishments.

- Item 21 of the Study recommends the recognition of bilateral and multilateral netting arrangements, and immediate reflection of these in capital adequacy standards. The stated intent is to "improve market efficiency" but the effect will be to significantly reduce the amount of regulatory capital without a clear, commensurate decrease in credit risk, unless the legal uncertainties have been clarified. Currently, the staff of the FDIC and the other banking agencies are working in unison to create modifications to the risk-based capital requirements with the intent of recommending recognition of bilateral netting in forms other than novation, where the contracts are deemed to be legally enforceable.

  With regard to multilateral netting arrangements, the banking agencies and international regulatory authorities have not reached the point where changing the risk based capital guidelines to recognize multilateral netting is considered to appropriate. This is in large part due to insufficient data supporting the operational and legal elements of these types of arrangements. While the concept appears to be theoretically sound, a successful track record in the exercise of these arrangements is necessary to validate consideration for a change in the existing capital standards.

- Item 22 recommends that governmental bodies work to identify and remove legal and regulatory uncertainties with respect to documentation,

capacity to enter derivative transactions, enforceability of bilateral and multilateral netting arrangements under bankruptcy law, and the legality of derivative transactions.[6] This appropriately identifies the numerous international legal issues which are a large part of existing credit exposure, and the background work performed in this part of the Study is the most comprehensive. The resolution of these issues are recognized by the FDIC as having substantial benefit for both the industry and supervisory authorities, and are being discussed internationally.

- Item 23 suggests that existing tax laws, particularly regarding gains and losses recognition on derivatives and underlying balance sheet activities, be amended so as to not "disadvantage" the use of derivatives in risk management strategies. The FDIC usually takes a neutral position on tax issues except when these are viewed as incompatible with safety and soundness considerations. The FDIC has, at present, no comment on the appropriateness of existing tax law.

- Finally, item 24 strongly and immediately recommends the international "harmonization" of accounting standards concerning derivative activities. The Study has determined that "[a]t present no country has accounting and reporting standards that comprehensively address all financial instruments, including derivatives." The Study further opines that "[c]oncern over current accounting regulations is deterring some organizations from pursuing commercially sensible risk management strategies," and is critical of a perceived accounting bias toward risk reduction instead of emphasizing "risk management."

  We agree that the FASB and others responsible for setting accounting standards should, as a high priority, issue definitive guidance on reporting for financial instruments, including derivatives. The FASB has a project on hedging which is actually part of a much larger "financial instruments" project that started in 1986. The issues involved in the

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[6] The reference to the "statute of frauds" refers to state laws which provide that contracts not to be performed within one year must be in writing in order to be enforceable. Contracts are generally governed by state, as opposed to federal, law. The phrase "ultra vires" means an act which is performed without authority. In this context it would refer to a corporation entering into a contract which is beyond the scope of its authority as set forth in its corporate charter or the laws of its state of incorporation. Thus, both of these legal concepts may affect the enforceability of derivatives and netting arrangements. These potential difficulties are magnified when dealing with parties located in different legal jurisdictions. In some cases it may be difficult to determine which "law" applies. In other cases, the applicable law may be murky.

accounting for derivatives are complex, far reaching and rapidly evolving, which in part explains the lengthy incubation period. The marketplace keeps developing new financial instruments and derivatives, making it difficult for any accounting standards to keep current. The FASB is understandably attempting to take a comprehensive approach rather than setting rules on an instrument-by-instrument or transaction-by-transaction basis.

Question 10. If the July 1993 Group of Thirty "Recommendation for Dealers and End Users" (Recommendations 1-20) are not implemented by regulation, are there adequate mechanism in place to ensure that such recommendations will be self-implemented? Concern has arisen regarding whether or not one can depend solely on the forces of managerial responsibility and market discipline as sufficient incentives to motivate firms to incur the implementation costs of the recommendations. Does your agency believe that mechanisms, such as periodic surveys of industry practice, a timetable for implementation, or a monitor of such actions are warranted?

10. Given that none of the first 20 recommendations are either outside the scope of current industry practice or particularly burdensome for major dealers, concern that primary market participants will largely ignore the conclusions of the Study is significantly lessened. The principal issues raised by the G30 are those of management and control, measurement of risk, and uniform standards of enforceability and reporting. The first two elements are applications of existing safety and soundness considerations to the derivatives marketplace. The concepts of setting policy at the highest levels of an organization, separation of duties, independent risk control, utilization of appropriate systems, and hiring competent personnel, are not unique to the derivatives industry. Likewise, the accurate and timely identification, measurement, reporting, and control of credit, legal, and market risks, are concerns common to other more traditional banking activities and investments. In this context, the existing regulatory examination process provides the basis for suitable enforcement of the Study recommendations.

Of greater concern is that the industry will rush to embrace the two portions of the Study not fully acceptable to the FDIC -- (1) the use of probability analyses by individual banks to measure their own market risk and by inference capital requirements, on a bank by bank basis, in place of the existing standardized "add-on" approach; and (2) the application of unlimited two way payments to determine credit exposure levels as part of a broader definition of bilateral netting. While refinements to the "add-on" method adopted by the Basle

Committee in 1988 are presently under study and the specifics may well be revised, the appropriate statistical standards have not yet been determined. The substitution by individual institutions of various probability analyses to determine the future capital component, is not acceptable to the FDIC. The use of an expanded definition of bilateral netting to determine credit exposure and capital requirements is not considered inconsistent with elements of FDICIA or the U.S. bankruptcy code. However, it would only be in the context of unambiguous legal jurisdiction and enforceability, and foreign legal strictures in this regard are far from clear. The FDIC recognizes that the general effect of bilateral netting is to reduce the existing capital requirements for derivative instruments and activities.

The Study serves as an excellent survey of industry practice. Further studies are likely to be conducted both by the industry and by all financial institution regulators. The timetable for implementation of many of these recommendations will be predicated on specific legislative and accounting changes outside the purview of the FDIC. However, the FDIC does intend to continue to closely monitor the progress of the derivatives industry, particularly insured financial institutions, in implementing these general recommendations. The FDIC will continue a review of the safety and soundness aspects mentioned in the Study at each applicable examination.

Question 11. Please comment on whether institutions should be required to establish separately-capitalized subsidiaries to conduct derivative activities.

11. At this time the FDIC Board of Directors has not endorsed a position either for or against separately capitalized subsidiaries. The staff has not been approached by a bank with a substantive plan for capitalizing and allocating assets and liabilities to a proposed separate subsidiary. Review of the particulars of a given structure by the staff at the FDIC would be appropriate prior to pronouncing whether creation of special purpose subsidiaries is appropriate for insured financial institutions.

While the FDIC has not yet drawn any conclusions, it is unclear why a separately capitalized subsidiary would be required by prospective counterparties for a sound, suitably capitalized, well managed financial institution to achieve the highest credit ratings and lowest possible transactions cost. On the other hand. institutions whose less than top tier industry credit ratings would most benefit from such a segregation, would also be more likely to be experiencing capital adequacy or other financial difficulties. This raises

some issues when considering the implications of removing a substantial amount of capital or valuable assets previously supporting deposit liabilities.

Question 12a. Do you believe the netting provisions contained in the Bankruptcy Code, FIRREA, and FDICIA should be conformed to a single standard? Do the netting provisions in these statutes adequately cover all situations? If not, what situations do and don't they cover?

12a. Conforming the netting provisions contained in the Bankruptcy Code, FIRREA and FDICIA to a single standard most likely would promote legal certainty. FDICIA appears to intend broad netting coverage. Netting is not linked to any one particular type of contract under FDICIA. In contrast to FDICIA, both FIRREA and the Bankruptcy Code enumerate the types of contracts which may be netted. In FIRREA, a contract may be netted if the contract fits within the definition of "qualified financial contract." The Bankruptcy Code imposes additional restrictions on netting derivatives. First, virtually all setoffs under the Bankruptcy Code, including the netting of derivatives, are subject to the automatic stay, except for the netting of "swap agreements" that fit within the Code's definition of "swap agreements." In addition to the automatic stay, the Code imposes substantive conditions on setoffs of obligations other than swap agreements. These conditions are not imposed by FDICIA or FIRREA.

The netting provisions contained in the Bankruptcy Code, FIRREA and FDICIA do not adequately cover all situations. The Bankruptcy Code's protections are linked to swap agreements. If a derivative product satisfies the Bankruptcy Code definition of swap agreement on all sides of the netting transaction, the netting can proceed without regard to either the automatic stay, the trustee's avoidance powers or the risk of selective repudiation of contracts. On the other hand, if a derivative product does not fit the Code's definition of a swap agreement, such as equity derivatives, bond options, spot foreign exchange agreements, or possible instruments not yet in existence, there will be substantial legal uncertainty and delay in at least four situations involving a bankruptcy debtor who has a net obligation or a net entitlement. For example:

- If a derivative product does not fit within the Code's definition of swap agreement (§ 101(55)), the automatic stay will delay the netting transaction. Only swap agreements are excepted from the automatic stay under § 362(b)(14). The Code defines "swap agreement" by enumerating twelve different types of agreements that will be considered swap agreements. In the case of an agreement which is not enumerated, the Code contains the catchall phrase "or any other similar agreement" to

reflect and allow for the continued and rapid development of new derivative products. Unfortunately, this phrase requires an ad hoc determination by the bankruptcy court, leading to possible uncertainty, delay and inconsistent results.

- If the parties to a derivative transaction seek to net a swap agreement across product types, it is unclear whether the exception to the automatic stay under § 362(b)(14) applies to the netting provision of the document.

- If a party seeks to net across product types, there is also uncertainty as to whether the master agreements should be treated as one single executory contract which can be immediately terminated. If the agreements are treated as separate executory contracts, there is a risk of selective repudiation and added uncertainty and delay.

- If a derivative product does not come within the definition of a swap agreement, there is risk that the transaction would not be protected under § 546(g) from the trustee's avoidance powers.

Question 12b. How was the resolution of derivative contracts handled in the failure of the Bank of New England? How effective were the current legal mechanisms in resolving the contracts?

12b. With respect to the Bank of New England failure, all derivative contracts met the legal definition of "qualified financial contracts" and were transferred to the bridge banks that were formed to absorb certain assets, liabilities and off-balance sheet obligations of the failed banks. The effect of this transfer was to have the FDIC temporarily step in as counterparty in place of the failed institution. Generally, this process of timely notification and other requirements of the FDI Act as, amended by FIRREA, was carried out without any problems.

The only modification the FDIC might recommend would be either to increase the recordkeeping responsibility of individual banks so that data could be compiled in an efficient and effective manner or to increase the notification period as defined in 12 U.S.C. Section 1821(e)(10)(A). This would help ensure proper notification while minimizing the potential for error.

Question 13. Recommendations contained in the July 1993 Group of Thirty Report (Recommendation 20) and elsewhere state that until harmonized accounting and disclosure standards are set, certain disclosures should be made

by dealers and end-users. Although a disclosure regarding credit risk is recommended, a similar disclosure for market risk is not mentioned. Should a summary measure of market-risk exposure be disclosed? If so, what form should such a measure take?

13. Recommendation 20 discusses the need for disclosing substantive information regarding the use of derivatives by dealer institutions, but unfortunately does not suggest the format or circumstances under which these disclosures should be made. While the areas listed in the Study are certainly appropriate issues to disclose in the published financial statements of banks which issue, trade, invest or otherwise make use of derivatives, there is no provision for having dealer institutions provide substantive disclosure of the risks of these instruments to end-users. This is of particular concern to the FDIC in our role as primary federal regulator of state non-member banks, which tend to be users, and in some cases unsophisticated users, of these products. Moreover, the absence of disclosure information presents significant examination and enforcement difficulties when these instruments are encountered. In future, should these products be introduced to the retail customers of these institutions on a resale basis or incorporated in other bank or mutual fund services, this absence of disclosures by the primary dealer may result in significant hidden risks.

    It is notable that the Study fails to specifically address this particular issue, as it would result in a significant departure from present practice by the financial services industry dealers in derivative products, and further would impose an actual implementation cost. However, detailed disclosures in this regard may be significantly more useful than the general summary of market-risk narrative suggested by the G30.

<u>Question 14.</u> **Please comment on the notion of establishing a clearinghouse offset mechanism for swaps transaction. How would a clearinghouse offset separately effect dealers and end-users. Would either benefit more than the other?**

14. Clearinghouse offset is practical only with the use of standardized contacts and application of consistent legal statutes for all participants, both foreign and domestic. This form of offset, commonly referred to as multilateral netting, could largely insulate contract holders from credit risk. Dealers would probably be exposed to unquantified, and possibly very large, failure risk of a member dealer, but end-users would probably face little or no credit risk. To the extent that dealer risks were lowered, perhaps by the substantial capitalization of the clearinghouse itself, possible cost savings to both dealers and end users might result. Users could also benefit from increased liquidity of

individual contracts. However, OTC swaps presently dominate the market, not just because of the legal uncertainties surrounding bilateral and multilateral netting, but because OTC swaps can be tailored for the needs of individual institutions. These instruments provide more precise hedging and risk management vehicles for individual asset or balance sheet positions. The loss of this flexibility, as well as the safety and soundness risk of imperfect hedge positions obtained "off the rack", may more than outweigh any benefits from clearinghouse offset.

Question 15. Are there adequate mechanisms currently in place to protect unsophisticated end-users of derivative products? If not, what are your recommendations?

15. Unfortunately the only effective protection for "unsophisticated users" of these products is sufficient knowledge and appropriate disclosure. Prohibitions on the use of certain forms of derivatives may effectively limit certain credit or market risks while simultaneously exposing users to the initial underlying (interest rate or basis) risks. Dollar limitations are difficult to enforce given the ease of entry and exit from the market, and moreover are often meaningless when expressed in terms of notional amounts. Current safety and soundness examination guidelines, in conjunction with existing enforcement powers, should provide sufficient supervisory control for banks, subject to constant revision to reflect changes in the marketplace. Protection for consumer users of these products would be better provided by mutual and pension fund disclosures specified by the appropriate agency.

Question 16. What kind of stress test simulations do you recommend to account for the different types of risk which arise as a result of financial derivative activity?

16. Stress test simulations can be valuable analytical tools, particularly for determining the impact of worst case scenarios. However, these methodologies tend to require complex mathematical models and extensive data bases to implement effectively. Moreover, even the most sophisticated models are only as good as the assumptions implicit in the underlying data, and remain subject to individual interpretation. In this context, these simulations should be tailored to the needs and capabilities of individual institutions.

Stress test analytics can and have been created to account for the full spectrum of risks inherent in derivative activities. Stress testing for credit risk would most likely focus on concentration risk. Stress testing for other market risks,

such as price, volatility, or basis risk, could be calculated for varying market interest rates. This analysis could be included as part of an overall assessment of interest rate risk. This last form of stress testing would be the most easily applicable to institutions of varying size and complexity.

Question 17. Please comment on your agency's view of the propose use and level of collateral in derivative transactions.

17. The use of collateral is appropriately a credit risk and pricing consideration and should remain an individual management decision. Of course, similar to any other credit risk, excessive or unwarranted exposure on an unsecured basis would be subject to regulatory criticism on safety and soundness grounds, leading to possible discretionary requirements for additional capitalization.

Question 18. When assessing a counterparty for credit risk, how much relative emphasis should be placed upon factors such as capital, disclosure and credit rating? For example, should a credit rating be a proxy for capital?

18. Responsible evaluation of credit risk is predicated on full financial disclosures by the counterparty and by the financial capacity unveiled by such disclosure. The individual analysis of credit risk reflecting all known information regarding the counterparty is no less essential for financial derivatives than it is for the extension of loans or purchase of securities. Credit risk analysis may be even more important, in that the expected cash flows from financial contracts are less likely to be based on the availability of collateral. The level of capitalization of a counterparty is also of substantial importance. While third party credit ratings generally reflect this capacity, they have distinct limitations. Credit risk for derivative counterparties should not be assessed solely on the basis of these ratings, any more than loan decisions are based entirely on credit agency reports.

Question 19. Are executive decisions regarding derivatives, on average, concentrated in too few individuals in each institution to catch problems in a time manner? Should the decision-making process, where derivatives are involved, be decentralized to enhance internal controls?

19. Internal controls over derivatives at a well-run "dealer bank" are normally disbursed over the trading function, operations processing, accounting, credit, and internal audit, with concentration guidelines, loss parameters and risk acceptance mandated by the board of directors and senior management. The perception of concentrated risk-taking is due to the comparatively few

individuals in any institution that comprehend all elements of the multifaceted derivatives marketplace, and also to the generally anonymous nature of "backroom" operations. The critically important credit analysis and review function is often handled as an extension of the commercial or international lending side of the bank, which scrutinizes derivative instruments counterparties as part of an overall borrower or client relationship. While this is also not normally associated with derivative activities, it is nevertheless an integral control function.

The speed of transactions within this market is of significant concern, but decentralization of risk-taking may actually expose the institution to greater risk. Because of the nature of trading, supervision of multiple traders in different locations is incrementally more difficult. Moreover, the institutional exposure from mismatched positions becomes more difficult to offset as different units of the same company transact independently. For end users, primarily smaller financial institutions, it is unlikely that more than a handful of individuals would be sufficiently knowledgeable of derivative products to warrant allowing decentralized risk assumption.

Question 20. Do compensation policies currently in place adequately discourage undue risk-taking? For example, if employees benefit financially from risk-taking in a direct manner, how is such risk-taking controlled?

20. Institutions compensate traders in direct ratio to the achieved returns, and implicitly the degree of risk assumed. This formula is inherent to bonus or commission-based compensation programs, but the down-side for the assumption by individuals of excessively risky positions is also implicit. While every institution has different guidelines for trader performance, the industry abounds with anecdotal history of jobs lost after only two or three deficit months or quarters. It is principally the responsibility of other segments of the institution apart from the trading floor to limit, measure, monitor and limit risk. Traders are then only responsible for operating profitably within the imposed parameters and guidelines. The strict segregation of the management, policy, and control functions from the trading and risk taking arms of the institution is particularly important in this regard.

Question 21. What is the level of systemic risk resulting from derivative activities? Do you agree with those who assert that derivative activities are concentrated in too few institutions?

21. Supporting statistical data on the level of systemic risk, or on the impact of a major participant default, is neither complete or conclusive. Systemic risk in any event would be very difficult to quantify. While the relatively small number of institutions playing major roles in dealing derivatives may appear to present some additional systemic risk, the comparatively thin margins on individual transactions also suggests little room for additional competitors. Despite the apparent benefits of wider financial industry use of derivative products, a persuasive argument can be made that only sophisticated users with comprehensive risk management strategies and qualified personnel should be allowed to participate on a large-scale basis.

Question 22. Cash liquidity risk for a firm appears to be of greater concern the greater is a firm's involvement in derivative activities, the greater is its reliance on short-term funding, the lower is its credit standing, and the more restricted is its access to central bank discount or borrowing facilities. Therefore, in contrast to depository institutions who, among other things, have access to the discount window, securities firms may find cash management requirements, such as maintaining margin requirements, arising from large derivatives portfolios to be more challenging. Compared to depository institutions, how does the less liquid nature of the securities business effect its derivative activities and the risk associated with such activities?

22. The liquidity position of securities firms is outside the purview of the FDIC's response. With regard to banks involved in derivative activities, the level of such activity and reliance on short term funding is not necessarily causal. It is not unusual for the type of institutions normally heavily engaged in such activities to be short-funded, because most are money center banks with typically shorter-term liability profiles. Nor is the incidence of default under these contracts clearly associated with any underlying cash liquidity problem. It is notable that the issue of credit ratings appears to be more of a factor for market participants other than commercial banks.

Question 23. Criticism of speculators in the derivative markets, primarily exchange-traded derivatives such as currency futures and options, has focused on the alleged ability of such speculators to manipulate markets. Concerns have also arisen as to potential depository institution exposure as a result of speculators' activities. Please comment on these criticisms and whether or not such speculators should be subject to increased regulation or supervision.

23. The existence of individuals, groups or companies who take large, unmatched, positions (speculators) is a fundamental part of all capital markets activities,

providing liquidity, balance and reliable pricing to the marketplace. The FDIC's concern is not so much that these speculators exist but rather that their activities pose no risk to the insurance funds. Our focus is on the extent of position-taking in derivative instruments by insured institutions and their agents, and what form supervision of this activity should take.

The sheer size and activity of the markets for the most popular and widely used derivative instruments, make it unlikely that an individual or institution, or even a group of speculators in collusion, would be able to manipulate the market for personal gain. Even in the short term, any attempt by any market participant or participants to move prices of exchange traded instruments would be immediately identified as a market inefficiency. Such inefficiencies, even small temporary ones, are quickly taken advantage of by arbitrageurs whose purchase or sale transactions move the market back toward equilibrium. One exception to this would be in thinly traded markets, but even then large price disparities are likely to be identified by the arbitrageurs. Current examination practice would carefully scrutinize any significant participation by insured institutions in such thinly traded markets.

Another exception would be when artificial restrictions are placed on markets, such as the European Community's Exchange Rate Mechanism (ERM). The ERM limits the fluctuation of each member's currency relative to the other ERM currencies. Should two currencies move out of alignment, one or both members are required to take corrective action, either by manipulating interest rates or through direct market intervention. In 1992, as Europe faced a deepening recession, the Deutsche Mark appreciated against the other ERM currencies, mandating corrective action. Germany would not lower its rates so the other European Community countries were forced to either keep their rates higher than economic conditions warranted, or spend enormous sums intervening in the market. Today, after several crises, England and Italy have withdrawn from the ERM, and the range within which currencies are allowed to fluctuate without a mandatory correction is approximately six times wider. The heavy speculation that took place earlier this year was enabled by similarly large market inconsistencies resulting from the ERM's artificial barrier. The magnitude of reported profits was largely made possible by massive intervention on behalf of several currencies, and the sizeable sums speculators were willing to bet on price movements. It is common policy and practice for traders of dealer institutions to use "stop-loss" orders. This allows them to have orders executed once a currency, financial instrument, or index reaches a certain level. This practice helps limit adverse effects during such unusual occurrences.

Question 24. What, if any, effect will the depositor preference provision of the Omnibus Budget Reconciliation Act of 1993 have on the derivatives market?

24. From a strictly legal standpoint it is difficult to assess the impact of the depositor preference provision of the Omnibus Budget Reconciliation Act of 1993 (Budget Act) on the derivatives market. The new national depositor preference statute provides six categories of claims. Secured claims are administered outside of the statute and are still enforceable in accordance with 12 U.S.C. 1821(e)(11).

When the FDIC is appointed conservator or receiver, it has certain rights and remedies with respect to contracts, including the right to repudiate certain contracts and limit damages. 12 U.S.C. 1821(e)(3). Although "derivatives" are not defined in the FDI Act, "qualified financial contracts" (QFC) are defined and receive more favored treatment under the FDI Act than do other contracts. This favored treatment of QFCs was not modified by the Budget Act. However, to the extent that claims under a QFC are subject to payment under 12 U.S.C. 1821(i), that claim would be a general creditor claim in category three under the depositor preference provision. 12 U.S.C. 1821(d)(11).

The depositor preference provision has resulted in an increased tendency for the FDIC to choose deposit transfers over purchase and assumption transactions in failing bank resolutions. This is due to the inherent uncertainty of long term asset recoveries in those cases where deposit claims will not clearly be covered by asset liquidations. In conjunction with FDICIA, which mandates the least expensive failing bank resolution, the depositor preference provision has made it increasingly likely that all non-deposit liabilities will be retained by the receiver. With the FDIC's ability to selectively enforce QFCs per FIRREA, a distinct element of counterparty credit risk is introduced into the derivatives market. This injects needed market discipline and in this fashion provides an additional level of protection for the insurance fund.

Insofar as depositor preference has tended to make this scenario more likely, the Budget Act will increase by an undetermined and most probably varying amount, the costs of participating in the derivatives market, both for dealer banks and end users. Aside from the obvious need to conduct individual counterparty credit analyses, dealer banks will be unable to rely on bilateral netting agreements with unlimited two way payments to either reduce direct credit risks or to provide an argument for decreased capital requirements. End users, including most thrifts and state non-member institutions, may find that

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the use of derivatives, even for the purposes of risk reduction or liquidity enhancement, will be incrementally costly as counterparties build in credit risk spreads or require collateral for the contracts. Problem institutions may find these avenues either shut entirely, or so limited in maturity as to be ineffective.

APPENDIX I

Glossary of Terms

Add-ons: The term used in the 1988 Basle capital accord that denotes the amounts added to the credit equivalent value of derivative contracts to reflect potential credit exposures arising from future price or volatility changes. Add-ons are calculated on the basis of notional principal values, and vary according to the nature of the derivative instrument and its maturity.

Agencies: For the purpose of this document, refers to the four principal financial institution regulatory agencies, the FDIC, OCC, FRB and OTS.

Arbitrage: Trading strategies designed to profit from price differences for the same or similar goods in different markets. Historically the term implied little or no risk in the trade, but more recently it has come to suggest some risk of loss or uncertainty about total profits.

Backroom Operations: Segregated supporting or control functions.

Bid/Offer Spread: The difference between the buying and selling price of an instrument.

Bilateral Netting : A proposed method for determining credit risk exposure positions which permits the offsetting of positions or payment obligations between two parties whereby a large number of individual positions or payment obligations are reduced to one single position or payment obligation, such that in the event of a counterparty's failure to perform due to default, bankruptcy or liquidation, the other counterparty would have a claim or payment obligation to receive or pay only the net value of the sum of unrealized gains and losses on all transactions.

BIS : Bank for International Settlements.

Caps: An option-like contract for which the buyer pays a fee, or premium, to obtain protection against a rise in a particular interest rate above a certain level. For example, an interest rate cap may cover a specified principal amount of a loan over a designated time period such as a calendar quarter. If the covered interest rate rises above the rate ceiling, the seller of the rate cap pays the purchaser an amount of money equal to the average rate differential times the principal amount times one quarter.

Clearing System (or Clearing House Arrangement): A mechanism for calculation of mutual positions within a group of participants with a view to facilitating the settlement of their mutual obligations on a net basis.

Collar: The simultaneous purchase of a cap and the sale of a floor with the aim of maintaining interest rates within a defined range. The premium income from the sale of the floor reduces or offsets the cost of buying the cap.

Collateralized Mortgage Securities: Mortgage-backed bonds or obligations secured by the cash flow of a pool of mortgages.

Commodity Options: A contract providing the purchaser the right, but not the obligation, to buy or sell a given quantity of a commodity at a strike price, on or before a given date.

Commodity Swaps: A transaction that allows an investor to exchange payment streams which are based on commodity prices. Commodity swaps involve swaps of payment streams only and are usually settled in cash. However, physical delivery may also occur. Commodity swaps enable producers and consumers to hedge commodity price risk. Usually, the consumer pays fixed, the producer floating.

Counterparty : One of the two entities engaged in a derivative transaction. Both the buyer and the seller are counterparties to each other.

Credit Equivalent Value: Amount representing the credit risk exposure in off-balance sheet transactions. In the case of derivatives, credit equivalent value represents the potential cost at current market prices of replacing the contract's cash flows in the case of default by the counterparty.

Credit Risk: The risk that a counterparty to a transaction will fail to perform according to the terms and conditions of the contract, thus causing the holder of the claim to suffer a loss.

Cross-Currency Interest Rate Swaps: A transaction involving the exchange of streams of interest rate payments (but not necessarily principal payments) in different currencies and often on different interest bases (e.g., fixed Deutsche Mark against floating dollar, but also fixed Deutsche Mark against fixed dollar).

Cross-Currency Settlement Risk (or Herstatt Risk): Risk relating to the settlement of foreign exchange contracts that arises when one of the counterparties to a contract pays out one currency prior to receiving payment of the other. Herstatt risk arises because the hours of operation of domestic interbank fund transfer systems often do not overlap due to time zone differences. In the interval between final settlement of each leg, counterparties are exposed to credit risk and market risk.

Cross Product Agreements: Master agreements between counterparties covering more than one type of derivative instrument.

Currency Swaps: A transaction involving the exchange of cash flows and principal in one currency for those in another with an agreement to reverse the principal swap at a future date.

Current Exposure Method: Term used in the Basle capital accord to denote a method of assessing credit risk in off-balance sheet transactions, consisting of adding the marked-to-market replacement cost of all contracts with positive value and an add-on amount for potential credit exposure arising from future price or volatility changes.

Dealers: Enter into transactions with customers and other market participants, seeking to profit by maintaining a generally balanced portfolio from which they expect to earn a bid/offer spread.

Deferral Accounting: The postponement of hedge instrument gains or losses to coincide with the maturities or repricing dates of the underlying asset or liability.

Discount Swaps: Also called off-market swaps, in which the fixed payments are below market rates. At the end of the swap, the shortfall is made up by one large payment. The credit risk taken on by the fixed rate recipient (usually the bank) increases with the discount applied to interest rates.

Division of Supervision: Division of the FDIC responsible for examination and supervision of open banks.

DOS Regions: Located in Atlanta, Boston, Chicago, Dallas, Kansas City, Memphis, New York and San Francisco.

Duration: A calculation measuring the price sensitivity of a financial instrument to changes in interest rates. Expressed as a measurement of time, duration measures the weighted average time to maturity of all cash flows from a financial instrument.

Embedded Options: An option (either tied to an interest rate index, to an equity price or an equity index) embedded in a debt instrument that affects the instrument's redemption. Examples include callable bonds and mortgage backed securities.

End-User (swap market): In contrast to a swap-trading institution, a counterparty which engages in a swap to change its interest rate or currency exposure. End-users may be nonfinancial corporations, financial institutions or governments.

Equity Options: Encompass a class of options giving the purchaser the right, but not the obligation, to buy or sell an individual share, a basket of shares, or an equity index at a predetermined price, on or before a fixed date.

Equity Securities: Principally stock or other traded ownership interests.

Equity Swaps: A transaction that allows an investor to exchange the rate of return (or a component there of) on an equity investment (an individual share, a basket or index) for the rate of return on another non-equity or equity investment.

Examination and Supervisory Guidance: The universe of regulations, statements of policy, operating bulletins, and examination and procedural manuals.

Exchange Traded: Instruments with standardized contract terms traded in an established clearinghouse environment.

Exercise Price (also Strike Price): The fixed price at which an option holder has the right to buy, in the case of a call option, or to sell, in the case of a put option, the financial instrument covered by the option.

FDICIA: The Federal Deposit Insurance Corporation Improvement Act of 1991

FIRREA: Financial Institutions Reform Recovery and Enforcement Act of 1989.

Floor: A contract whereby the seller agrees to pay to the purchaser, in return for the payment of a premium, the difference between current interest rates and an agreed (strike) rate times the notional amount should interest rates fall below the agreed rate. A floor contract is effectively a string of interest rate guarantees.

Foreign Exchange Contracts: Agreement between two parties to exchange one currency for another at an agreed upon exchange rate.

Forward Rate Agreement (FRA): A contract in which two counterparties agree on the interest rate to be paid on a notional deposit of specified maturity at a specific future time. Normally, no principal exchanges are involved, and the difference between the contracted rate and the prevailing rate is settled in cash.

Funding: The obtaining of capital, debt and deposits.

Futures Contract: An exchange-traded contract generally calling for delivery of a specified amount of a particular grade of commodity or financial instrument at a fixed date in the future. Contracts are highly standardized and traders need only agree on the price and number of contracts traded. Traders' positions are maintained at the exchange's clearinghouse, which becomes a counterparty to each trader once the trade has been cleared at the end of each day's trading session. Members' positions are marked-to-market daily at the clearinghouse and members must post margin. Most trades are unwound before delivery. The interposition of the clearinghouse facilitates the unwinding since a trader need not find his original counterparty but may arrange an offsetting position with any trader on the exchange.

GAAP: Generally Accepted Accounting Principles.

Global Market: Generally the largest industrialized nations.

Group of Thirty: Blue ribbon international panel of industry, legal, and academic representatives, supported by the major institutional participants in the global financial markets.

Hedge Funds: Speculative funds managing investments for private investors (in the US, such funds are unregulated if the number of investors does not exceed one hundred).

Hedging: A financial technique used to offset investment risk such as risk of loss from price fluctuations in the market.

Historical Loss Rates: Determined from data accumulated over a given time frame.

Index: A numerical figure or statistical measure adjusted periodically to reflect changes in the quantity of goods produced, prices paid or loan interest rates, by comparing current activity to a base year or other specified time frame.

Insured Financial Institutions: For the purposes of this document, commercial banks, savings banks, savings and loans, and certain trust companies, thrift companies and industrial loan companies that have federal deposit insurance coverage.

Interest Rate Contracts: For purposes of this document, include interest rate swaps, caps, options, floors, futures, forwards and forward rate agreements.

Interest Rate Risk (IRR): The adverse net worth or earnings impact on individual positions, portfolios or institutions resulting from changes in the market interest rate environment.

Interest Rate Swap: A transaction in which two counterparties exchange interest payment streams of differing character based on an underlying notional principal amount. The three main types are coupon swaps (fixed rate to floating rate in the same currency), basis swaps (one floating rate index to another floating rate index in the same currency), and cross-currency interest rate swaps (fixed rate in one currency to floating rate in another currency).

Intermediary (swap market): A counterparty who enters into a swap in order to earn fees or trading profits. Most intermediaries, or swap dealers, are major U.S. money-center banks, major U.S. and U.K. investment and merchant banks, and major Japanese securities companies.

Intraday Credit (or Daylight Credit): Credit extended for a period less than one business day; in a credit transfer system with end-of-day final settlement, daylight credit is tacitly extended by the receiving institution if it accepts and acts on a payment order even though it will not receive final funds until the end of the business day.

ISDA: International Swap and Derivatives Association.

Leverage: The debt to equity position of a company.

Liquidity: Characteristic of a security or commodity with enough units outstanding to allow large transactions without a substantial decrease in price.

Margin: Funds or collateral posted as a good-faith performance guarantee. Futures and options exchanges often require traders to post initial margin when they enter into new contracts. Margin accounts are debited or credited to reflect changes in the current market prices on the positions held. Members must replenish the margin account if margin falls below a minimum. In similar fashion, customers must post margin on positions held for them at the exchange clearinghouse by member firms.

Market Liquidity: Measured by participants as the extent to which their own actions (transactions) change the market price of an asset. A market is said to be liquid if the immediate reversal of a transaction does not involve losses (other than fixed transaction costs).

Market Liquidity Risk: The uncertainty associated with the market liquidity of a financial asset. Often considered as the risk that a (negotiable or assignable) financial instrument cannot be sold quickly and at a price close to its fundamental value.

Market risk: The risk of a change in the price of an asset resulting in a financial loss to the holder when the asset is sold. Price, interest rate, volatility, basis, and currency risks are commonly referred to as market risks.

Marking-to-Market: The process of recalculating the exposure in a trading position or a portfolio (of securities, equities or derivatives) on the basis of current market prices.

Master Agreement: An agreement that incorporates the entire range of derivative (usually swap) transactions between two counterparties into one legal agreement.

Money Center Banks: Large, multinational US banks historically headquartered in New York, Chicago and San Francisco.

Multilateral Netting: Netting arrangements involving more then two counterparties.

Netting (or Netting Schemes): An agreed offsetting of positions or obligations by trading partners or participants in a system. The netting reduces a larger number of individual positions or obligations to a smaller number of positions. Netting may take several forms which have varying degrees of legal enforceability in the event of default of one of the parties.

Notional Value (or Notional Principal): The underlying face amount on which some index, price movement, interest rate or multiple, acts in order to determine the actual cash flows to be paid or received. Notional principal amounts calibrate the volume of future cash flows but do not represent the actual amount transferred.

Novation: The satisfaction and discharge of existing contractual obligations by the substitution of new contractual obligations (whose effect, for example, is to replace gross with net payment obligations.)

Off-Balance Sheet Activities: Banks' business that does not generally involve the recording of assets or liabilities. Examples include trading in swaps, options, futures, and foreign exchange forwards, and the granting of stand-by commitments and letters of credit.

Option: The contractual right, but not the obligation, to buy or sell a specified amount of a given financial instrument at a fixed price before or at a designated future date. A call option confers on the holder the right to buy the financial instrument. A put option involves the right to sell the financial instrument.

Original Exposure Method: A term used in the Basle capital accord to denote a method for assessing the credit risk in a derivatives portfolio, consisting of applying a standard set of conversion factors to the notional principal amounts of each instrument according to the nature of the instrument and its maturity.

OTC Market (Over-the-Counter Market): Trading in financial instruments transacted off organized exchanges. Generally the parties must negotiate all details of the transactions, or agree to certain simplifying market conventions. In most cases, OTC market transactions are negotiated over the telephone. OTC trading includes transactions among market-makers and between market-makers and their customers. Firms mutually determine their trading partners on a bilateral basis.

Peer Group: Institutions with similar size and other characteristics, within parameters established by the Agencies.

Premium: The price paid for an option by an option holder to an option writer.

Primary Federal Regulator: For Nationally chartered banks the Office of the Comptroller of the Currency; for State Member Banks the Federal Reserve; for State Nonmember Banks the Federal Deposit Insurance Corporation and for Savings and Loans the Office of Thrift Supervision.

Qualified Financial Contract: Specifically defined in FIRREA to include any "securities contract, commodity contract, forward contract, swap agreement, and any similar agreement ..."

Reference Rate: The interest rate used as an index for pricing or determining cash flow of a derivative product.

Risk Management: In the context of this document, altering the impact of market risks on the balance sheet or its components.

Risk Based Capital: Defined in Part 325 of the FDIC Rules and Regulations to reflect different capitalization requirements for different balance sheet assets and off balance sheet instruments.

Safety and Soundness Examination: Conducted by DOS to determined the financial capacity of insured institutions.

Settlement Risk: Between two counterparties, the risk that a counterparty to whom a firm has made a delivery of assets or money defaults before the amounts due or assets have been received; or the risk that technical difficulties interrupt delivery or settlement even if the counterparties are able to perform. In the latter case, payment is likely to be delayed but recoverable. Settlement risk exposes no-fault parties to credit, cash liquidity and market risk.

Stop-Loss Order: A mechanism by which a dealer (or end user) leaves instructions with a counterparty to buy or sell a particular instrument (currency, future, option, etc.) when its price reaches a certain level. The level of an index (Dow Jones Industrial Average, S&P 500, CRB, etc.), or the price of a different but related instrument can also be used as the trigger mechanism for the order.

Swap: A financial transaction in which two counterparties agree to exchange streams.of payments over time according to a predetermined rule. A swap is normally used to transform the market exposure associated with a loan or bond borrowing from one interest rate base (fixed term or floating rate) or currency of denomination to another.

Swaptions: An option to enter (or cancel) a swap.

Systemic risk: The risk that a disruption (at a firm, in a market segment, to a settlement system etc.) causes widespread difficulties at other firms, in other market segments or in the financial system as a whole.

Tier 1 Capital: Defined in Part 325 of the FDIC Rules and Regulations essentially as common and preferred stock less most intangible assets and identified losses.

Trading: The purchasing or selling of instruments in attempts to take advantage of incremental price movements.

Two Way Payments: Provision under a master agreement establishing the continuation of contractually obligated payments following a bankruptcy or other default event. Limited two way payments allows for the possible interruption of contractual cash flows due to certain default events (such as FDIC receivership), while unlimited two way payments require the continuation of such cash flows irrespective of the nature of the event.

Underlying: The designated financial instruments which must be delivered in completion of an option contract or a futures contract. For example, the underlying may be fixed-income securities, foreign exchange, equities, or futures contracts (in the case of an option on a futures contract).

Unmatched Position: Acceptance of the market risk of a contract without entering into an opposite or offsetting contract to allow benefit from the same market risk or risks.

US Banks: Banks whose headquarters are domiciled in the states or possessions of the United States.

Value Calculation Models: Used to calculate the present value of future cash flows using forward yield curves and probability expectations.

Variation Margin: The gain or loss on open positions, calculated by marking to market at the end of each trading day. Such gain or loss is credited or debited by the clearinghouse to each clearing member's account and by members to their customer's accounts.

Volatility: A measure of the variability of the price of an asset, usually defined as the annualized standard deviation of the natural log of asset prices.

Appendix II

Derivatives Market Commentary: 1992

This was another year of growth in the derivatives industry. The International Swap and Derivatives Association (ISDA) reported in its annual survey that over-the-counter (OTC) derivatives, such as interest rate swaps, caps, collars, and options on those products increased by 19.76% in terms of total notional principal outstanding over 1991. Those categories break down as follows:

Type	Notional ($ billions)	% Increase
Interest Rate Swaps	3,851	25.6
Currency Swaps	850	5.3
Caps, Collars, Options	627	8.7
Total:	**5,328**	**19.8**

The general decline in interest rates experienced during the last half of 1992 had a two-fold effect: first, it caused a decline in the rate of growth of OTC transactions, because it allowed borrowers to more easily issue conventional fixed rate debt instead of issuing floating rate debt and hedging the resulting IRR in the derivatives market. Second, the steep yield curve, combined with falling rates caused a shift in the types of transactions end users and dealers favored. Industry figures show a marked decline in the number of end users who pay the fixed rate in swap transactions in 1992, with nearly every segment of the market, excluding the thrifts, increasing the percentage of swaps on which they receive the fixed rate in their portfolios. The result of this shift in trading policy has been to drive swap spreads (the difference between the swap rate and the like-term government security) to historic lows.

Activity levels in exchange traded derivatives also increased in 1992. These products include interest rate and currency futures, as well as options on the futures contracts. Overall, total futures and options activity increased by 19.21% in 1992 in terms of total number of contracts traded. Exchange traded activity for 1992 breaks down as follows:

Type	Number of Contracts Traded	% Increase
Interest Rate Futures	153,335,831	28.0
Currency/Index Futures	26,594,825	- 7.4
Interest Rate Options	37,428,654	20.7
Currency/Index Options	10,320,550	-10.5
Total:	**227,679,860**	**19.2**

Of all the futures contracts, the T-Bond contract, trading on the Chicago Board of Trade, was the most prolific, with over 70 million contracts traded. However, a close second is the Chicago Mercantile Exchange's (CME's) 90 day Eurodollar contract, with over 60 million contracts traded. Additionally, the CME's Eurodollar contract nearly doubled in volume in 1992.

APPENDIX III

Summary of Inclusions

Interest Rate Risk (IRR): This section contains detailed discussions of such concepts as Duration, Volatility, and Convexity, and explains how knowledge of these factors can assist an institution in managing its IRR. Additionally, the material in this section contains the relevant material from the DOS Manual of Examination Policies on analyzing an institution's interest rate sensitivity, an advisory from the Office of the Comptroller of the Currency, a bulletin from the Office of Thrift Supervision, as well as several articles of interest published by industry participants.

Futures and Options: Financial Futures and Options are traded both on regulated exchanges and Over-the-Counter (OTC). The contents of this section include definitions of the different types of futures and options, market terminology, as well as definitions and methods of calculation for various characteristics of futures and options, including option value, volatility, delta, gamma, epsilon, and theta. Also included are excerpts from the Federal Financial Institutions Examination Council (FFIEC) procedures; the text of and various commentaries on the Statement of Financial Accounting Standards No. 80 (FASB 80), which concerns accounting for futures transactions; the FDIC's Statement of Policy Concerning Interest Rate Futures Contracts, Forward Contracts, and Standby Contracts; the DOS Examination policy manual sections "Interest Rate Forward and Futures Contracts", "Interest Rate Options", and "Forward Rate Agreements"; and several articles of interest on the use of options and futures for various hedging needs. Pages 17 through 22.03, 305 through 314, and 315 through 320 have been recently revised.

Interest Rate Swaps and Caps/Floors: Interest Rate Swaps, Caps, Floors, and Collars are traded entirely OTC. This section contains "Interest Rate Swaps" and "Interest Rate Caps and Floors" from the DOS Manual of Examination Policies; the DOS Regional Directors Memorandum from June 23, 1987 entitled "Interest Rate Swaps"; discussions on yield mathematics; use of swaps, caps, and floors in hedging applications; accounting and supervisory issues related to these products; and a discussion of the terminology, use, and risks involved with these products. Pages 1 through 4.03 have been recently revised.

Foreign Exchange: This section is principally comprised of the Foreign Exchange section of the DOS Manual of Examination Policies, and deals with the unique risks to which a bank is exposed when it enters the foreign exchange markets. These risks, each of which are examined in the section, are: exchange rate risk, IRR, credit risk, country risk, and operational risk. Additionally, this section addresses the need to evaluate the extent to

which a bank participates in the foreign exchange market, and to determine if their internal policies and procedures are sufficient to address their level of involvement in the market. Broadly speaking, the policy statement covers minimum standards for written bank policies, basic internal controls, and audit documentation. Also included in this section is a discussion of the different types of foreign exchange contracts. This section has been recently revised.

Sample Off-Site Monitoring Report: This section contains a sample of the Summary of Financial Institution Mortgage and Off-Balance Sheet Securities Activities report, which is compiled on a quarterly basis by the Office of Capital Markets. This report provides information about the level of Mortgage and Derivative securities activity for insured institutions, on both a national and regional level.

Selected Training Material: Seminars are given twice annually by the Office of Capital Markets to regional bank examiners to ensure familiarity with all Capital Markets products, including financial derivatives. This includes not only the mechanics of derivative products, but also includes current issues in the markets, new or emerging products, information about the volumes of the various derivative products, and case studies.

ATTACHMENT B

The Office of Thrift Supervision Response

Office of Thrift Supervision
Department of the Treasury
Director
1700 G Street, N.W., Washington, D.C. 20552 • (202) 906-6590

October 4, 1993

The Honorable James A. Leach
Committee on Banking, Finance
and Urban Affairs
U.S. House of Representatives
Washington, D.C. 20515-6050

Dear Congressman Leach:

Thank you for your inquiry of August 9, 1993, requesting the assistance of the Office of Thrift Supervision in preparing an informational study on financial derivatives. Our responses to the twenty-four questions raised in your letter are attached. Please let me know if we can be of further assistance.

Sincerely,

Jonathan L. Fiechter

Jonathan L. Fiechter
Acting Director

Enclosures

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Answers to the Derivatives Questions Submitted by Congressman Leach

1) a) In general, please summarize and provide the written policies and procedures currently used by your agency to regulate and monitor derivatives activities of the institutions under your supervision. Also, please provide a summary of your regulatory authority over derivatives transactions.

Last spring the OTS provided a study of the use of derivatives by savings associations to Senator Riegle. Chapter 4 of that study summarizes the policies and procedures used by the OTS to regulate and monitor derivatives activities of savings associations. Chapter 6 of the study outlines the training in derivatives that OTS provides examiners. The Riegle derivatives study appears in Section 1 of the supplementary material.

A package of the written policies and procedures used by the OTS to regulate and monitor derivatives activities of savings associations is attached.

1) b) The Joint Report mentions that reporting requirements disclose the notional values of certain derivatives only, and therefore do not address the institution's actual exposures which may average approximately 2%-8% of the notional amount. What suggestions do you have for changing the reporting requirements to reflect actual exposures from derivatives activities, including, but not limited to, credit exposure and market

exposure? Do you feel any changes are needed?

The Joint report was issued by the Federal Reserve Board, the Office of the Comptroller of the Currency, and the Federal Deposit Insurance Corporation. The OTS did not participate in the drafting of the Joint Report but rather prepared a separate report (see Section 1 of the Supplementary Material). In contrast to the banking agencies, OTS collects fairly detailed information on derivatives. OTS collects information on all major types of off-balance-sheet instruments, including futures, options, swaps, caps, floors, swaptions, and various types of commitments. Key information is collected for each type of instrument, including a code to identify the type of contract, its notional amount, the time to maturity or expiration, and relevant interest rates and margins. Using this information, OTS estimates the current value of 277 different types of instruments and their contribution to risk or risk reduction in each of 9 separate interest rate scenarios on a quarterly basis.

OTS also collects information on the rest of an institution's assets and liabilities in combination with the information on derivatives that is used to estimate the interest rate risk of the institution's entire portfolio. Only by estimating the interest rate sensitivity of the portfolio with and without derivatives, can the incremental contribution of derivatives to risk or risk reduction be assessed.

OTS believes that its current reporting requirements provide sufficient information about the derivatives activities of savings institutions. OTS has no plans to change reporting requirements

for derivatives.

1) c) Please provide a discussion of reporting changes currently under consideration by your agency.

Early this year OTS completed extensive revision of Schedule CMR (Consolidated Maturity and Rate information) of the quarterly Thrift Financial Report. Schedule CMR was revised to collect more detailed information on derivatives as described in the response to question 1)b). There are no plans to change reporting requirements at this time.

2) Please discuss in detail capital requirements, both current and proposed, as they relate to derivatives activities of institutions regulated by your agency. Do you feel the current capital standards are adequate?

Under the current risk-based capital rule of OTS, capital requirements for financial derivatives are based primarily on the credit risk of an institution's portfolio of derivatives. There is no explicit capital charge for the interest rate risk associated with derivatives. The capital requirement for financial derivatives (i.e., interest rate swaps, basis swaps, forward rate agreements, interest rate options purchased, and similar instruments), which are off-balance-sheet contracts, is based on the "credit equivalent amount" of each contract. The credit equivalent amount of each contract is the sum of the mark-to-market value of the contract (if positive) plus the estimated potential future credit exposure over

the remaining life of each contract. The potential future credit exposure on a contract is estimated by multiplying the notional principal amount of the contract by 0.5 percent for contracts greater than one year. (There is no add-on for contracts of less than one year.) Once the credit equivalent amount for the contract has been determined, the amount is assigned to the risk weight category appropriate to the counterparty (not to exceed 50%).

OTS recently revised its risk-based capital rule to take account of interest rate risk, including the interest rate risk and risk reduction associated with financial derivatives. The new rule is effective on January 1, 1994. Under the revised rule, institutions with "above normal" levels of interest rate risk will be subject to an interest rate risk capital component. OTS developed a model to estimate the interest rate risk exposure of savings associations. The results of that model will be used by OTS to determine how much capital, if any, an association will be required to hold for interest rate risk. The OTS model takes account of financial derivatives in measuring an institution's interest rate risk exposure.

OTS believes that the revised risk-based capital rule, which takes account of interest rate risk, represents a significant and much needed improvement over the existing framework. Although further improvements to the risk-based capital regulations can be made, OTS believes that the new rule achieves the objective of relating the capital requirements of institutions more closely to their risk exposures.

3) Please discuss which types of derivative instruments institutions under your jurisdiction are, and are not, permitted to utilize for different functions, including trading for customer accounts, trading (revenue) for their own accounts, and hedging for their own accounts. Please indicate the relative use of different derivative instruments by such institutions. In addition, please indicate the relative use of derivatives by such institutions for the different functions mentioned above.

Savings institutions are end-users of derivatives. They do not act as dealers or traders. Savings institutions that use derivatives are expected to use them to reduce risk. OTS rules for futures require that institutions enter only interest-rate related contracts, and use futures only to reduce interest rate risk. Institutions are not permitted to enter futures contracts for purposes other than interest rate risk reduction. Similarly, options contracts should be used only to reduce interest rate risk. OTS does not have specific regulations governing the use of swaps by savings associations. However, the Regulatory Handbook: Thrift Activities directs that management monitor the correlation of swap positions with the assets and liabilities being hedged.

Few savings institutions use derivatives. As of June 30, 1993, only 117 of 1822 private sector savings associations reported holdings of any off-balance-sheet derivatives. Of these, 82 institutions reported holdings of swaps, 43 reported options, and 20 reported futures contracts. Savings institutions do not trade derivatives for customer accounts. The vast majority of savings

associations that use derivatives use them to hedge asset and liability accounts.

4) Please discuss the benefits that may be realized from utilizing derivative instruments, such as using them for risk management and asset-liability management purposes.

Could the development and use of derivative products by savings and loans (S&Ls) and others have helped to prevent the S&L crisis? For example, could the use of interest rate swaps by S&Ls have helped them to sufficiently control duration and interest-rate mismatches? (Especially mismatches due to long-term mortgage assets yielding low interest rates being combined with short-term liabilities commanding high interest rates.)

Derivative products are used to manage the risks associated with changes in interest rates and changes in the value of currencies, equities, and commodities. Within the thrift industry, derivatives are used primarily as asset-liability tools to manage interest rate risk. The major benefits derived from the use of derivatives in the thrift industry include:

1) Increased financial flexibility. The introduction of derivatives has provided the industry with additional tools for managing interest rate risk. These tools enable institutions to alter cash flows with more precision and thus allow institutions to modify risk exposures with greater ease.

2) Lower cost of asset-liability management. Asset-liability

management is the management of risk exposures to meet the risk-return objectives. Prior to the introduction of derivatives, risk-return tradeoffs were managed primarily by altering the mix of an institution's portfolio of asset and liabilities. For example, an institution that wanted to reduce its exposure to rising interest rates might have lengthened the duration of its liabilities by replacing short-term borrowings with long-term debt. Today, an institution can effectively accomplish the same result at a lower cost by entering into an interest rate swap.

3) Ability to better serve needs of customers. The use of derivatives has enabled savings associations to better satisfy consumer demands for specific types of products, such as fixed-rate mortgages, by enabling thrifts to better manage the risk associated with those products.

It is debatable whether the use of derivatives by savings and loans would have altered the dimensions of the S&L crisis. On the one hand, had S&L's used financial derivatives in the late 1970s and early 1980s to reduce their interest rate exposure (assuming for the moment that derivatives existed and thrifts had the expertise to use them properly), there is little doubt that they would have helped to prevent the S&L crisis. On the other hand, there is no reason to believe that S&L's would have used derivatives to reduce their interest rate exposure since few observers of financial markets anticipated the sharp rise in interest rates that occurred at that time. Most of the derivatives

used today to manage interest rate risk, such as swaps, interest rate options, and many futures contracts, were not developed until after the rate shocks of the late 1970s and early 1980s.

5) a) What are your primary regulatory concerns regarding derivatives activities of institutions supervised by your agency?

As with any other financial instrument, our primary concern with derivatives is that they might be used to take imprudent risks. In addition, there is the concern that derivatives might be used improperly by employees who do not have sufficient technical expertise.

b) Do you believe that any fundamental changes in the current regulatory framework for institutions using financial derivatives is needed at this time?

OTS does not believe that any fundamental changes in the current regulatory framework are needed. OTS believes, however, that it may be beneficial for regulators to encourage dealers and end-users of derivatives to comply voluntarily with the recommendations in The Group of Thirty Report. It may also be useful to conduct an interagency review of the capital treatment of derivatives under the risk-based capital standards to determine whether any changes to those standards are needed.

6) Is there adequate coordination between U.S. and foreign regulators to regulate risks associated with derivatives? Does the

BIS report of April 1993 address all of your agency's concerns in this area?

While the Bank for International Settlements (BIS) has coordinated discussions between U.S. and foreign regulators on the regulation of derivatives, OTS has not been a party to those discussions -- even though such discussions have potential implications for the capital standards applicable to savings associations. Based on the extensive work OTS has done on interest rate risk, we believe that we could contribute to those discussions and would welcome the opportunity to participate.

7) Individual derivative contracts, taken by themselves, include elements of risk. However, derivatives, when evaluated as part of an institution's entire portfolio, are often used to offset and reduce the overall risk exposure of an institution. How do your regulatory actions, including capital and accounting standards, take into account the use of derivatives to reduce the overall risk exposure of an institution? For the purpose of regulation, how does your agency distinguish between derivatives used to hedge and reduce overall risk, such as many over-the-counter (OTC) contracts, and derivatives used for trading and other purposes, such as many exchange-traded contracts?

With respect to derivatives, or any other financial instrument, OTS believes that the "risk" that one needs to be concerned about is not the risk of a particular instrument on a "stand-alone basis," but rather the risk of an institution's entire

portfolio of assets, liabilities, and off-balance-sheet instruments. This "portfolio approach" to risk analysis is widely accepted throughout the financial community and is embedded in the OTS approach to interest rate risk analysis. OTS has for several years supervised interest rate risk on such a total portfolio basis and has recently revised its risk-based capital requirements to incorporate a total portfolio-based interest rate risk component into the risk-based capital framework. As a result of that revision, the amount of capital that an institution must hold for interest rate risk is based on the overall interest rate risk exposure of the institution.

Derivatives that are used to hedge and that meet GAAP requirements for hedge accounting are given hedge accounting treatment. Gains and losses on the hedge are deferred by adjusting the carrying value of the hedged item. Derivatives that do not meet those requirements do not receive hedge accounting. Exchange traded contracts are used for hedging by the thrift industry, as are over-the-counter contracts. In fact, thrifts may enter exchange traded futures contracts only to reduce interest rate risk.

8) Recently published reports on derivatives activities, such as the July 1993 Group of Thirty report entitled Derivatives: Practices and Principles and the May 1993 Institute of International Finance, Inc. (IIF) report entitled An Integrated Regulatory Approach to Derivatives Activities stress the importance of internal controls over regulation in many areas. However, the Group of Thirty report has been criticized by some for relying too

heavily on industry self-regulation.

a) Regarding banks, the IIF report states, for example, that banks themselves should develop trading and credit policies that set their own risk limits. Do you think that such maximum risk limits should be set by institutions or by regulators?

As a general rule, risk limits should be set by the institutions, not by regulators. OTS formalized this philosophy in 1989 with the issuance of Thrift Bulletin 13. It is the responsibility of regulators to review those limits to determine their appropriateness. If the self-imposed risk limits are too loose, regulators should insist that they be tightened. If the limits are not being observed, regulators should take corrective action.

b) In general, to what extent, and in what areas, do you think regulators should rely on internal controls versus regulatory requirements?

The responsibility for the safe and sound operation of a financial institution rests primarily with its management and board of directors. It is the responsibility of regulators to evaluate management, to ensure that management is operating the institution in a safe and sound manner, and to insist that corrective action be taken when needed.

OTS believes that the management and board of directors of an institution should establish internal controls that cover all major areas of financial and operational risk. Regulators should

evaluate the effectiveness of such controls through the examination process. In general, regulatory requirements should not be imposed on financial institutions unless it can be demonstrated that such regulatory requirements are necessary to protect the public interest.

When OTS examiners determine that an institution's internal controls are deficient, they take steps to ensure that corrective action is taken.

c) Do you feel that any of the "Recommendations for Dealers and End-Users" contained in the Group of Thirty report (Recommendations 1-20) should be formally mandated by regulation? Please comment on the different issues addressed in the recommendations with specificity.

OTS generally agrees with the recommendations but does not believe that they should be implemented by regulation. Savings institutions are end-users of derivatives, not dealers. Recommendations 2 through 8 apply to dealers and are not addressed separately. OTS concurs with recommendations 13 through 15 but has no additional comment on them.

Recommendation 1: The Role of Senior Management

Dealers and end-users should use derivatives in a manner consistent with the overall risk management and capital policies approved by their boards of directors. These policies should be reviewed as business and market circumstances change. Policies governing derivatives use should be clearly defined, including

the purposes for which these transactions are to be undertaken. Senior management should approve procedures and controls to implement these policies, and management at all levels should enforce them.

OTS Position: OTS concurs in this recommendation but does not believe it is necessary to implement the recommendation by adding new regulations. Existing OTS policies require that senior management and the board of directors follow safe and sound management procedures. Thrift Bulletin 13 (included in the Supplementary Material) outlines the internal policy, practices, and procedures that institutions should use to comply with regulations on interest rate risk.

Recommendation 9: Practices by End-Users

As appropriate to the nature, size, and complexity of their derivatives activities, end-users should adopt the same valuation and market risk management practices that are recommended for dealers. Specifically, they should consider: regularly marking to market their derivatives transactions for risk management purposes; periodically forecasting the cash investing and funding requirements arising from their derivatives transactions; and establishing a clearly independent and authoritative function to design and assure adherence to prudent risk limits.

OTS Position: OTS concurs in this recommendation but does not believe it is necessary to implement the recommendation through

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additional regulation. Thrift Bulletin 13 advises savings association to estimate the market value of their entire asset and liability portfolio each quarter as a means of measuring interest rate risk exposure and to set appropriate exposure limits. In addition, the OTS interest rate risk model estimates the market value of derivatives of savings associations that file Schedule CMR with OTS. The results of the OTS model are also distributed to savings associations. The model estimates provide OTS examiners and supervisors with a means to assess the reasonableness of the assumptions used by savings associations in valuing their derivatives.

Recommendation 10: Measuring Credit Exposure

Dealers and end-users should measure credit exposure on derivatives in two ways:

- Current exposure, which is the replacement cost of derivatives transactions, that is, their market value.

- Potential exposure, which is an estimate of the future replacement cost of derivatives transactions. It should be calculated using probability analysis based upon broad confidence intervals (e.g., two standard deviations) over the remaining terms of the transactions.

OTS Position: OTS agrees that both current exposure and potential exposure are important components of the actual market exposure of derivatives. OTS calculates the credit-risk component of the

capital requirement using measures of both current and potential exposure. OTS estimates potential exposure to IRR or potential reduction in exposure to IRR from derivatives positions with the OTS model.

Recommendation 11: Aggregating Credit Exposures

Credit exposures on derivatives, and all other credit exposures to a counterparty, should be aggregated taking into consideration enforceable netting arrangements. Credit exposures should be calculated regularly and compared to credit limits.

OTS Position: OTS concurs in this recommendation. OTS's loans-to-one-borrower rule establishes a maximum credit exposure limit to one counterparty.

Recommendation 12: Independent Credit Risk Management

Dealers and end-users should have a credit risk management function with clear independence and authority, and with analytical capabilities in derivatives, responsible for:

- **Approving credit exposure measurement standards.**
- **Setting credit limits and monitoring their use.**
- **Reviewing credits and concentrations of credit risk.**
- **Reviewing and monitoring risk reduction arrangements.**

OTS Position: OTS concurs in this recommendation but does not believe that it is necessary to implement the recommendation through regulation. OTS policy directs thrifts to maintain the internal controls and expertise needed to follow this

recommendation.

Recommendation 16: Professional Expertise

Dealers and end-users must ensure that their derivatives activities are undertaken by professionals in sufficient number and with the appropriate experience, skill levels, and degrees of specialization. These professionals include specialists who transact and manage the risks involved, their supervisors, and those responsible for processing, reporting, controlling, and auditing the activities.

OTS Position: OTS concurs in this recommendation. As a matter of sound policy, institutions should not use derivatives, or any other financial products, unless they understand the products and have the expertise needed to manage the risks associated with their use. The depth of expertise needed by an institution will depend on the scope of its derivatives activities and their complexity. OTS does not believe that it is necessary to implement this recommendation by regulation.

Recommendation 17: Systems

Dealers and end-users must ensure that adequate systems for data capture, processing, settlement, and management reporting are in place so that derivatives transactions are conducted in an orderly and efficient manner in compliance with management policies. Dealers should have risk management systems that measure the risks incurred in their derivatives activities including market and credit risks. End-users should have risk management systems

that measure the risks incurred in their derivatives activities based upon their nature, size, and complexity.

OTS Position: OTS concurs in this recommendation and believes that adequate systems are a basic requirement of good management. The availability of data from such systems would enable examiners to better assess the risk exposures of the institutions they examine. OTS policy directs institutions to maintain risk management systems and controls for derivatives. OTS does not believe that it is necessary to implement this recommendation by regulation.

Recommendation 18: Authority

Management of dealers and end-users should designate who is authorized to commit their institutions to derivatives transactions.

OTS Position: OTS concurs in this recommendation. As with any other financial transaction, management should designate who is authorized to conduct derivatives transactions. OTS policy, for example in TB-13, directs that specific individuals be authorized to conduct derivatives transactions, and that the transactions be monitored. OTS regulations for futures and options require the board of directors to authorize any trading in those derivatives and to establish internal controls on the use of those derivatives. OTS does not believe that it is necessary to implement the recommendation by regulation.

Recommendation 19: Accounting Practices

International harmonization of accounting standards for derivatives is desirable. Pending the adoption of harmonized standards, the following accounting practices are recommended:

- Dealers should account for derivatives transactions by marking them to market, taking changes in value to income each period.

- End-users should account for derivatives used to manage risks so as to achieve a consistency of income recognition treatment between those instruments and the risks being managed. Thus, if the risk being managed is accounted for at cost (or, in the case of an anticipatory hedge, not yet recognized), changes in the value of a qualifying risk management instrument should be deferred until a gain or loss is recognized on the risk being managed. Or, if the risk being managed is marked to market with changes in value being taken to income, a qualifying risk management instrument should be treated in a comparable fashion.

- End-users should account for derivatives not qualifying for risk management treatment on a mark-to-market basis.

- Amounts due to and from counterparties should only be offset when these is a legal right to set off or when enforceable netting arrangements are in place.

Where local regulations prevent adoption of these practices, disclosure along these lines is nevertheless

recommended.

OTS Position: OTS concurs in this recommendation but does not believe the recommendation should be implemented by regulation. The recommendation is consistent with existing GAAP required by OTS. GAAP policy in the area is summarized below.

Swaps

Accrued settlement amounts resulting from interest-rate swaps that are used to hedge deposit liabilities increase or decrease interest expense. Gains and losses on terminated swaps are deferred and amortized over the remaining contractual term of the terminated swap. Swaps that are not used for hedging purposes are marked-to-market.

Futures

OTS requires that futures contracts be accounted for in accordance with SFAS 80. When hedging criteria are satisfied, the accounting for the futures contract is related to the accounting for the hedged item. Changes in the market value of the futures contract are recognized in income when the effects of related changes in the price or interest rate of the hedged item are recognized. Such reporting results in deferred gains or losses. When hedging criteria are not satisfied, futures contracts are marked-to-market.

Options

Purchased options that are matched with balance sheet items

are subject to hedge accounting treatment. If the option is "out-of-the-money" when purchased (for example, the strike price of a put is less than the current market price of the underlying instrument), the fee paid is recorded as an asset and amortized over the option period. When the option is "in-the-money," the portion of the fee paid equal to the difference between market and the strike price (the "intrinsic value") is deferred until the option is exercised. When the option is exercised, any gain or loss adjusts the basis of the matched item and is amortized over the life of the matched item. Unmatched purchased options are marked-to-market.

Written put options do not qualify for hedge accounting. The premium received from the sale of a put is placed on the balance sheet as cash and deferred income and the put is marked-to-market. Gains and losses on open positions are recorded as assets and liabilities, respectively. Gains increase earnings and losses decrease earnings.

A written call option does not qualify for hedge accounting. The entire option commitment fee received is deferred. There is no effect on earnings until the resulting gains and losses are recognized upon termination of the option position.

Recommendation 20: Disclosures

Financial statements of dealers and end-users should contain sufficient information about their use of derivatives to provide an understanding of the purposes for which transactions are undertaken, the extent of the transactions, the degree of risk

involved, and how the transactions have been accounted for. Pending the adoption of harmonized accounting standards, the following disclosures are recommended.

- Information about management's attitude to financial risks, how instruments are used, and how risks are monitored and controlled.
- Accounting policies.
- Analysis of positions at the balance sheet date.
- Analysis of the credit risk inherent in those positions.
- For dealers only, additional information about the extent of their activities in financial instruments.

OTS Position: Annual financial statements typically disclose accounting policies and an analysis of any material positions in derivatives at the balance sheet date. Management discussion and analysis in Securities Act filings typically contain information about the risk profile of the institution and how management uses derivative instruments to control risk.

9) Please comment on the four "Recommendations for Legislators, Regulators, and Supervisors" contained in the July 1993 Group of Thirty report (Recommendations 21-24) as they are relevant to your agency. Please comment on each recommendation separately.

Recommendations 21-24 contained in the Group of Thirty report are listed below along with OTS's position on each.

Recommendation 21: Recognizing Netting

Regulators and supervisors should recognize the benefit of netting arrangements where and to the full extent that they are enforceable, and encourage their use by reflecting these arrangements in capital adequacy standards. Specifically, they should promptly implement the recognition of the effectiveness of bilateral close-out netting in bank capital regulations.

OTS Position: The Office of Thrift Supervision generally concurs with this recommendation. The other banking agencies have undertaken a rulemaking to recognize bilateral netting arrangements within the risk-based capital framework. OTS is considering joining this rulemaking. Such netting by novation or other legally binding form under written contract must result in the institution having a claim or obligation to pay, respectively, only the net value of the sum of unrealized gains and losses on included transactions in the event of the counterparty's default, bankruptcy, or liquidation.

Recommendation 22: Legal and Regulatory Uncertainties

Legislators, regulators, and supervisors, including central banks, should work in concert with dealers and end-users to identify and remove any remaining legal and regulatory uncertainties with respect to:

- **The form of documentation required to create legally enforceable agreements (statute of frauds).**

- **The capacity of parties, such as governmental entities, insurance companies, pension funds, and building societies, to enter into transactions (ultra vires).**

- **The enforceability of bilateral close-out netting and collateral arrangements in bankruptcy.**

- **The enforceability of multibranch netting arrangements in bankruptcy.**

- **The legality/enforceability of derivatives transactions.**

OTS Position: OTS concurs in this recommendation and is willing to work with others to identify and remove legal and supervisory uncertainties.

Recommendation 23: Tax Treatment

Legislators and tax authorities are encouraged to review and, where appropriate, amend tax laws and regulations that disadvantage the use of derivatives in risk management strategies. Tax impediments include the inconsistent or uncertain tax treatment of gains and losses on the derivatives, in comparison with the gains and losses that arise from the risks being managed.

OTS Position: OTS agrees with this recommendation.

Recommendation 24: Accounting Standards

Accounting standards-setting bodies in each country should, as a matter of priority, provide comprehensive guidance on accounting and reporting of transactions in financial instruments, including derivatives, and should work towards international harmonization of standards on this subject. Also, the International Accounting Standards Committee should finalize its accounting standard on Financial Instruments.

OTS Position: OTS concurs in this recommendation. This must be accomplished by the Financial Accounting Standards Board (FASB) rather than by regulation. An objective of FASB's project on financial instruments is to establish accounting guidance for derivative financial instruments. The FASB also works with the International Accounting Standards Committee to foster international harmonization of standards.

10) If the July 1993 Group of Thirty "Recommendations for Dealers and End Users" (Recommendations 1-20) are not implemented by regulation, are there adequate mechanisms in place to ensure that such recommendations will be self-implemented? Concern has arisen regarding whether or not one can depend solely on the forces of managerial responsibility and market discipline as sufficient incentives to motivate firms to incur the implementation costs of the recommendations. Does your agency believe that mechanisms, such as periodic surveys of industry practice, a timetable for

implementation, or a monitor of such actions are warranted?

Many of the recommendations of the Group of Thirty are already part of OTS policy and regulations. While it is not clear that additional regulation in this area is needed, OTS believes that there may be some benefit to encouraging institutions to self-implement the recommendations. Such self-implementation could be encouraged through the examination process.

11) Please comment on whether institutions should be required to establish separately-capitalized subsidiaries to conduct derivatives activities.

Savings associations are involved with derivatives as end-users rather than as dealers. There does not appear to be any reason to require end-users to conduct derivatives transactions in separately-capitalized subsidiaries, as such a practice would make it impossible to use derivatives to hedge the risks of a particular subsidiary. There may be some merit to requiring depository institutions that are dealers in derivative products to conduct such activities in separately-capitalized subsidiaries.

12) Do you believe the netting provisions contained in the Bankruptcy Code, FIRREA, and FDICIA should be conformed to a single standard? Do the netting provisions in these statutes adequately cover all situations? If not, what situations do and don't they cover?

Currently, OTS recognizes only netting by novation. OTS is

participating in an interagency rulemaking to recognize bilateral netting resulting in a single enforceable legal obligation in calculating institutions' risk-based capital ratios. Netting by novation or other legally binding form under written contract must result in the institution having a claim or obligation to pay, respectively, only the net value of the sum of realized gains and losses on included transactions in the event of the counterparty's default, bankruptcy, or liquidation.

OTS generally believes that depository institutions should be able to rely on a single netting standard that controls their netting of derivative contracts with counterparties under the banking laws and governs the netting of claims on, or obligations to, counterparties under the Bankruptcy Code. The banking agencies should conduct a study to identify the disparities between the federal banking laws and the Bankruptcy Code, as well as whether those differences are appropriate. The agencies also should determine what remedial action by the banking agencies is feasible and appropriate.

13) Recommendations contained in the July 1993 Group of Thirty Report (Recommendation 20) and elsewhere state that until harmonized accounting and disclosure standards are set, certain disclosures should be made by dealers and end-users. Although a disclosure regarding credit risk is recommended, a similar disclosure for market risk is not mentioned. Should a summary measure of market-risk exposure be disclosed? If so, what form should such a measure take?

OTS concurs in this recommendation but does not believe the recommendation should be implemented by additional regulation. Management discussion and analysis in Securities Act filings typically contain information regarding interest rate risk associated with derivatives held by the institution.

14) Please comment on the notion of establishing a clearinghouse offset mechanism for swaps transactions. How would a clearinghouse offset separately affect dealers and end-users? Would either benefit more than the other?

Swaps involve counterparty performance risk. Measuring and constantly evaluating counterparty credit risk is difficult and costly. As a result, a variety of mechanisms have evolved to lower these costs, including dealers, credit rating systems, and collateral requirements. A clearinghouse is another means to mitigate counterparty risk.

Clearinghouses mitigate counterparty risk by providing a means of netting out a defaulting party's open positions. Such netting can require calculating mark-to-market values across a broad spectrum of products. This in turn requires accurate prices, which are costly to ascertain unless identical products are constantly trading. Daily margin calls lower potential losses from default. If a default occurs, all open positions held by the party in default are netted by the clearinghouse into a single position. Any loss remaining after the netting is covered by the members of the clearinghouse as joint and several obligations.

Initially, swaps were customized exchanges of interest pay-

streams between two parties. Swaps lacked publicly available prices and were difficult to liquidate, making a clearinghouse an inefficient mechanism for netting and clearing transactions. However, "plain vanilla" swaps have become much more common and the swap market now has considerable depth. As a result, some types of swaps have observable prices that are constantly updated. These types of swaps could be run through a clearinghouse mechanism. However, there is still a large segment of the swap market for which a clearinghouse would be an inefficient solution.

In a clearinghouse mechanism, all participants share in the costs of defaults by individual parties. Thus, the market participants with lower credit ratings would benefit by a clearinghouse mechanism, at the expense of those with better credit ratings. However, a clearinghouse may lower overall costs sufficiently so that all participants benefit by extension of the market.

Swaps are currently exempt from futures regulation. One condition for the exemption is that such transactions not be settled through a clearinghouse. Establishing a clearinghouse mechanism would make swaps subject to futures regulation.

In late 1991, the Chicago Board of Trade began trading swap futures. These contracts were standardized "plain vanilla" 15-year swaps and had the additional counterparty default protection of a clearinghouse. They stopped trading about six months later because of low volume.

15) Are there adequate mechanisms currently in place to protect unsophisticated end-users of derivative products? If not, what

are your recommendations?

The savings institutions supervised by OTS that use derivative products are required to develop and maintain expertise and internal controls when using derivatives. In addition, all institutions are required to maintain an awareness of their interest rate risk and to set limits on the risk that they are willing to accept. OTS examiners review the monitoring and internal controls of thrifts to ensure that the derivatives are being used prudently. Also, institutions having positions that increase their interest rate risk above a specified threshold are required to hold additional capital against that risk.

16) What kind of stress test simulations do you recommend to account for the different types of risk which arise as a result of financial derivatives activity?

In January 1989, OTS issued Thrift Bulletin 13 which outlines the responsibilities of boards of directors and managements of savings associations with respect to interest rate risk. That bulletin requires savings associations with over $500 million in assets to subject their balance sheets to stress tests that include parallel shifts in the term structure of interest rates of plus and minus 100, 200, 300, and 400 basis points. The tests are to be conducted each quarter. In addition, OTS recommends that institutions subject their portfolios to non-parallel interest rate shocks. Stress test simulations are included in the OTS IRR model and are conducted each quarter as part of OTS' ongoing effort to

monitor the interest rate risk exposure of the industry.

17) Please comment on your agency's view of the proper use and level of collateral in derivatives transactions.

Collateral requirements are used to guarantee performance on a contract. Collateral is important when there is some chance that a counterparty may default on a contract. Savings associations are required to restrict their choice of counterparties to banks and well-capitalized nonbank counterparties. If a savings institution believes that there is a significant chance that a counterparty may not perform on a derivative contract, the institution should request collateral from the counterparty to guarantee performance.

While collateral or a third party performance guarantee may sometimes be desirable to ensure performance on a derivative contract, excessive collateral requirements might discourage the use of derivatives for risk reduction purposes. Moreover, mandatory collateral requirements could reduce liquidity in the derivatives markets and raise the cost of risk management.

18) When assessing a counterparty for credit risk, how much relative emphasis should be placed upon factors such as capital, disclosure and credit rating? For example, should a credit rating be a proxy for capital?

An analyst who is reviewing the financial condition of a dealer for purposes of assessing counterparty risk will want to make certain tests and apply certain standards to be able to rank

classify, and judge the merits of doing business with that dealer by comparing its financial strength to that of other dealers. The analyst is likely to place considerable emphasis on comparative financial ratio analysis, a process whereby an array of financial ratios are used to compare the financial condition and performance of the dealer with the condition and performance of other dealers in its peer group.

An analysis of the dealer's capital position would be one element in an overall analysis that would also include an analysis of the dealer's earnings, profitability, liquidity, and debt capacity. Generally, analysts will use credit ratings only as a screening tool and not as a substitute for in-depth analysis. For example, an analyst might decide to do business only with dealers that have at least a double-A rating. Another factor analysts should consider is the regulated nature of the entity (for example, a registered broker/dealer member of an exchange subject to SEC standards, versus an unregulated entity). In all cases, the analyst should be comfortable with the accuracy and level of financial information disclosed by the dealer.

19) Are executive decisions regarding derivatives, on average, concentrated in too few individuals in each institution to catch problems in a timely manner? Should the decision making process, where derivatives are involved, be decentralized to enhance internal controls?

The OTS does not believe that it is the purview of regulators to determine for an association how many individuals should be

involved in decision making activities or how centralized or decentralized operations should be. As part of the OTS on-site examination effort, examiners evaluate the quality and competence of management and assess their understanding of the institution's interest rate risk exposure as well as their understanding of derivative products and derivatives strategies. In evaluating the quality and competence of management, examiners assess: 1) whether management adopts and enforces sound policies governing the use of derivatives; 2) how well personnel understand the risk characteristics of the derivatives in use; and 3) the adequacy and effectiveness of internal controls for limiting the risks associated with derivatives, including controls designed to prevent unauthorized transactions.

20) Do compensation policies currently in place adequately discourage undue risk-taking? For example, if employees benefit financially from risk-taking in a direct manner, how is such risk-taking controlled?

OTS regulation of compensation contracts discourages undue risk-taking by requiring prior approval of all employment contracts for institutions that pose safety and soundness concerns. As a general rule, the OTS will defer to the savings association's board of directors concerning executive compensation arrangements, provided that: 1) the savings association is not a problem association (i.e., the association is in compliance with minimum capital requirements and has not otherwise been designated a problem association), and 2) compensation arrangements do not

present safety and soundness concerns. All problem institutions are required to submit employment contracts for senior executive officers and directors to OTS for review. OTS may extend this requirement to other employees as well, when appropriate.

21) What is the level of systemic risk resulting from derivatives activities? Do you agree with those who assert that derivatives activities are concentrated in too few institutions?

The principle source of systemic risk in derivatives markets is related to major international banks and investment banking firms that act as dealers in the over-the-counter derivatives market. The thrift industry participates in derivatives markets as end users, not as dealers. In addition to being a relatively small player in the derivatives market, savings associations use derivatives primarily to limit exposure to interest rate risk. Moreover, OTS has taken a number of steps to ensure the prudent use of derivatives so that savings associations do not become a source of systematic risk.

The principal source of systemic risk that would directly affect savings associations is the credit risk of a major dealer or other counterparty that could "spill over" and affect the health of the thrift industry, or impair the liquidity of derivatives markets.

Systemic risk resulting from the concentration of derivatives in too few institutions relates, again, to dealers. Since thrifts are end-users and not dealers in derivatives, this question is more applicable to the banking agencies and the SEC.

22) Cash liquidity risk for a firm appears to be of greater concern the greater is a firm's involvement in derivatives activities, the greater is its reliance on short-term funding, the lower is its credit standing, and the more restricted is its access to central bank discount or borrowing facilities. Therefore, in contrast to depository institutions who, among other things, have access to the discount window, securities firms may find cash management requirements, such as maintaining margin requirements, arising from large derivatives portfolios to be more challenging. Compared to depository institutions, how does the less liquid nature of the securities business affect its derivatives activities and the risks associated with such activities?

OTS has no specialized knowledge of securities firms or how their liquidity might affect their derivatives activities and associated risks. This question is better directed to the Securities and Exchange Commission. However, we can say that, if securities firms were provided access to the discount window at a low cost, they would likely respond by maintaining less liquidity than they do now. The extension of the public safety net, in the form of discount window privileges, raises important public policy issues including whether such an extension would erode market discipline of the securities industry.

23) Criticism of speculators in the derivatives markets, primarily exchange-traded derivatives such as currency futures and options, has focused on the alleged ability of such speculators to

manipulate markets. Concerns have also arisen as to potential depository institution exposure as a result of speculators' activities. Please comment on these criticisms and whether or not such speculators should be subject to increased regulation or supervision.

Speculators provide a useful role by making the market more liquid and efficient. More important, they absorb risks that other market participants, including depository institutions, desire to transfer. For example, for an interest-rate swap to take place, a thrift attempting to hedge its interest-rate risk requires a counterparty willing to take the other side of the swap transaction. The counterparty must be willing to assume the risk that the savings association is attempting to reduce by hedging. Occasionally, a counterparty faces risks that are opposite those of the thrift and uses the derivative position to hedge as well. Generally, however, the counterparty must be willing to absorb risk in entering the derivative contract with the savings association.

Speculation should not be confused with market manipulation, which is harmful and forbidden in the futures and options markets. OTS does not believe, however, that savings associations themselves should be permitted to use derivatives or any other financial instrument to speculate (that is, to take excessive and undue risks) with federally insured deposits. The OTS also directs savings associations to use great care in choosing counterparties for derivatives transactions.

It would be impossible, and even counterproductive, to regulate speculators. Attempting to regulate the activities of one type of speculative investor would likely invite in other investor

that would be able to profit from the absence of regulated speculators. In general, if potentially profitable speculative opportunities exist, markets will find ways to innovate around government regulations, provided that the financial rewards of circumventing regulations exceed their costs. Imposing regulations that are costly enough to eliminate speculators will effectively eliminate the options available to depository institutions to hedge their risk.

24) What, if any, effect will the depositor preference provision of the Omnibus Budget Reconciliation Act of 1993 have on the derivatives market?

Depositor preference could slightly increase credit risk in certain derivative products. Depositor preference allows the FDIC to seize assets to pay off insured deposits before paying off other creditors. This could leave less money available to pay off other creditors, including counterparties to rate swaps.

In practice, thrifts and small banks customarily pledge collateral to protect their counterparties. Collateral may be seized by the FDIC if one of the counterparties fails, however, so depositor preference could still increase risk. The FDIC's practice, however, has been to pay off collateralized claimants fully. Given this practice, depositor preference would not increase risk in derivative products for thrifts and small banks. Depositor preference may increase the cost of these activities, however, because losses could increase if the FDIC were to change its practice. Some very large commercial banks who are also

dealers do not usually put up collateral when they are a principal on one side of a swap. Depositor preference would increase risk for thrifts that are counterparties to such large banks.

ATTACHMENT C

The Federal Reserve Response

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON, D. C. 20551

ALAN GREENSPAN
CHAIRMAN

October 6, 1993

The Honorable James A. Leach
Ranking Member
Committee on Banking, Finance and Urban Affairs
U.S. House of Representatives
Washington, DC 20515-6050

Dear Congressman:

I am pleased to respond to your request for information on issues involving derivatives activities and their impact on the U.S. banking system and the global financial system. As you have noted, these are very complex issues that tend to be relatively poorly understood. The questions that you have asked are timely and important, and clearly you and your staff members already have devoted considerable effort to understanding the issues.

The preparation of our response was overseen by the Board's Committee on Derivative Instruments, chaired by Governor Phillips. The Committee drew on the expertise of staff in a variety of disciplines, including bank supervisors, attorneys, economists, and payments system experts.

The Federal Reserve has been working actively with market participants and with other regulators to ensure that both private institutions and policymakers successfully meet the challenges posed by derivatives activities. The Board believes that the development and expansion of derivatives activities have provided important public benefits by making risk management more effective and less costly. However, the Board recognizes that derivatives activities, if not managed prudently, could entail significant risks to individual institutions and perhaps also have implications for the stability of the financial system.

The Board believes that the key to addressing these concerns is to foster sound risk management of derivatives activities by dealers and end-users of these products. To that end, the Federal Reserve has made the strengthening of bank regulatory and supervisory policies relating to derivatives activities a high priority. The Federal Reserve and the other banking regulatory agencies have released for public comment proposals by the Basle Supervisors Committee to modify risk-based capital requirements to incorporate measures of market risk (including market risks associated with derivatives) and to recognize reductions in credit risks through use of legally enforceable netting arrangements for derivatives. We also have begun field-testing of a new examination manual that enhances and consolidates materials addressing derivatives activities and have

introduced new training courses for bank examiners that strengthen their understanding of these materials.

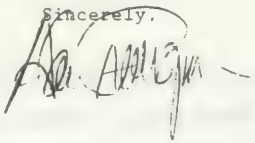
The Federal Reserve also encouraged the Group of Thirty to sponsor a Global Derivatives Study. This study provides useful information and analysis and sets forth sound risk management principles in the form of recommendations for market participants. The Board has encouraged the derivatives industry to implement these recommendations, because such efforts promise to improve risk management practices by both regulated and unregulated entities in the United States and abroad.

The Federal Reserve has worked for some time with market participants and other regulators to strengthen the infrastructure supporting derivatives activities. In particular, we have supported a series of legislative steps to ensure that netting arrangements for derivatives contracts are legally enforceable in the United States. In addition, we have supported efforts by the Commodity Futures Trading Commission to eliminate the threat that OTC derivatives contracts could be deemed unenforceable off-exchange futures contracts.

The Board believes that the Federal Reserve and other banking regulators have the tools necessary to ensure that banking organizations adopt sound risk management practices and maintain adequate capital to support their derivatives activities. With respect to the use of derivatives by other entities, the Board will continue to analyze these issues and will study closely the results and conclusions of the studies that Congress has requested from the CFTC and the General Accounting Office.

I hope you find the information we have provided helpful. Please let me know if we can be of further assistance.

Sincerely,



Responses to Questions on Financial Derivatives

Posed by

Congressman James A. Leach
Committee on Banking, Finance, and Urban Affairs
U.S. House of Representatives

October 6, 1993

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QUESTION 1) a)

To supplement the discussion on "Supervision and Regulation of Derivatives" contained in Section III of the January 27, 1993 report issued jointly by the Federal Reserve, the FDIC, and the OCC entitled Derivative Product Activities of Commercial Banks ("Joint Report"), please address the following:

a) In general, please summarize and provide the written policies and procedures currently used by your agency to regulate and monitor derivatives activities of the institutions under your supervision. Also, please provide a summary of your regulatory authority over derivative transactions.

Regulatory Authority

The Board of Governors of the Federal Reserve System (Board) has general supervisory and regulatory authority over the activities of state-chartered banks that are members of the Federal Reserve System ("State Member Banks"), bank holding companies, and the nonbank subsidiaries of bank holding companies. The Board also has authority with respect to the activities of foreign branches of member banks, Edge Act and agreement corporations, foreign subsidiaries of bank holding companies or member banks, and foreign banking organizations with offices in the United States.

In order to engage in derivative transactions, a state member bank must have authority under its state charter. The Board cannot authorize a state member bank to engage in an activity that would not be permissible under applicable state law, but can under some circumstances limit or condition the activities of state member banks.[1]

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[1] Under the Federal Reserve Act, the Board may prescribe conditions for membership in the Federal Reserve System. FRA § 9 (12 USC § 321). Admission to membership generally has been conditioned on a requirement that the bank not permit any change in the general nature of its business or in the scope of its corporate powers exercised after admission to membership without the permission of the Board. This condition is now included in the Board's Regulation H, Membership of State Bank Institutions in the Federal Reserve System. 12 CFR § 208.7(a)(1).

The Board also has the authority to limit the activities of state member banks consistent with the provisions of the FDI Act, which generally prohibits an insured state bank from engaging as principal in any activity that is

The Board's authority over bank holding companies and their nonbank subsidiaries derives from the Bank Holding Company Act of 1956.[2] Under the Bank Holding Company Act, a bank holding company generally may not engage in any activity, or own shares of any company engaged in any activity, other than banking or managing or controlling banks, subject to certain exceptions.[3] One of these exceptions permits bank holding companies to engage in any activity, or own shares of any company engaged in any activity, that the Board has determined, either by regulation or order, to be so closely related to banking or managing or controlling banks as to be a proper incident to banking.[4] The Board therefore has the authority to determine that particular derivatives activities are permissible generally for bank holding companies or to approve specific activities for individual companies. In either case the Board may impose any conditions on the activities that it considers appropriate.

In addition to activities permitted a member bank under its charter, the Board may authorize the foreign branch of a member bank to engage in activities that are usual in connection with the business of banking in the place where the foreign branch will transact business, with certain exceptions.[5] The Board also has authority to permit an Edge and agreement corporation to engage in activities that are usual in connection

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not permissible for a national bank, unless the FDIC has determined that the activity poses no threat to the insurance fund and the bank is in compliance with applicable capital standards. Limits on the activities of a state member bank may also be imposed by the Board where the activity poses a threat to the safety and soundness of the bank. 12 USC §§ 330, 1831a.

[2] 12 USC § 1841 et seq.

[3] See 12 USC § 1843(a).

[4] 12 USC § 1843(c)(8).

[5] 12 USC § 604a.

with the business of banking in the place where the foreign branch of the corporation will transact business.[6] Similarly, the activities of bank holding company subsidiaries established for the purpose of engaging in business overseas are subject to regulation by the Board.[7]

The Board also has authority with respect to the activities of foreign banking organizations with offices in the United States, including the non-banking operations of a foreign bank that maintains a branch, agency, or subsidiary bank in the United States. A United States branch of a foreign bank may be a federal or state-licensed branch. A federal branch of a foreign bank generally may engage in the same activities that a national bank at the same location would be permitted to engage in. A state-licensed branch or agency may engage in activities permitted by the state licensing authority, but may not engage in any activity that is not permissible for a federal branch unless specifically approved by the Board and, in the case of an insured state branch, the FDIC.[8] Additionally, a foreign banking organization that maintains a branch, agency, or subsidiary bank in the United States is required to conform its nonbanking financial operations in the United States with the nonbanking restrictions of section 4 of the Bank Holding Company Act to the same extent as if it were a domestic bank holding company.[9]

Policies and Procedures

The Federal Reserve regulates and monitors the derivatives activities of

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[6] 12 USC § 615(a).

[7] 12 USC § 1843(c)(13).

[8] 12 USC §3105(h).

[9] 12 USC § 3106(a).

institutions under its jurisdiction through its risk-based capital adequacy guidelines, policy guidance on safe and sound banking practices, and on-site examinations. Significant supervisory and regulatory policy and procedural matters are communicated primarily through the use of a system of SR (supervision and regulation) letters and a number of technical supervisory manuals designed to provide guidance to examiners during on-site examinations. Additional examination procedures developed on-site to meet the specific situations of individual organizations, the review of reports received from banking organizations, and examiner training are also important elements of the overall system that the Federal Reserve has developed to fulfill its supervisory responsibilities in overseeing derivatives activities. A brief summary of each of these areas follows. As requested in the footnote to Question 1, the specific policies, procedures, manuals, reports and training materials that are referenced below are presented in Sections 1 through 27 of the Supplementary Material submitted with this response.

Risk-Based Capital Guidelines - In 1989, the Federal Reserve System adopted risk-based capital requirements that require institutions to hold capital against the credit risk inherent in both on- and off-balance-sheet instruments. The current guidelines require that capital be held against credit equivalent amounts for both interest-rate and foreign-exchange contracts. These credit-equivalent amounts are computed to account for both the current risk exposure of a contract and the potential future risk that may arise over the contract's remaining life. Item 1 of the Supplemental Material contains the Federal Reserve's Risk Based Capital guidelines.

Bank supervisors are in the process of incorporating market risks, such as interest rate, foreign exchange, equity price, and commodity price risk into the current capital

guidelines. Pursuant to Section 305 of Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA), the banking agencies are moving forward to incorporate interest rate risk into the risk based capital guidelines. On September 14, the banking agencies published in the Federal Register a Notice of Proposed Rulemaking on this issue (Presented as Item 2 of the Supplementary Material). The proposal outlines specific treatment for assessing the interest rate risk of derivatives activities in the context of the overall interest rate risk of a bank. After the comment period, the agencies will develop a final rule with plans to implement it in 1994. In addition, in April 1993 the Federal Reserve Board issued for public comment several consultative papers on market risk and bank capital developed by the Basle Committee on Banking Supervision, under the auspices of the Bank for International Settlements. These papers are presented as Item 3 of the Supplementary Material and deal with the supervisory treatment of netting arrangements, the capital requirements for traded debt and equity portfolios of banks, foreign exchange risk, and interest rate risk in the "banking book." The papers describe the current status and direction of ongoing efforts directed at internationally active banks in the supervision of market risk.

The response to Question 2 discusses in greater detail the Federal Reserve's current capital requirements for derivatives activities and summarizes both the international and domestic initiatives regarding capital adequacy and market risks that are underway.

Examination Policies and Procedures - The objectives of on-site examinations include: 1) evaluating an institution's soundness and compliance with banking laws and regulations; 2) appraising the quality of management and directors; and 3) identifying areas for corrective action. In order to guide examiners in planning and conducting on-site examinations, a

number of technical supervision manuals have been developed by the Federal Reserve System. In general, these manuals are divided into sections relating to appropriate asset, liability, banking activity or examination categories. In turn, a typical section contains an introductory discussion of sound banking practices and examination procedures along with specific examination objectives, procedures and internal control questionnaires to be used in conducting an exam. Although they are not definitive legal sources, these manuals, when supplemented with subsequent policy guidance communicated through various SR letters, serve as working references to current regulatory and supervisory policies and procedures.

A number of Federal Reserve supervisory manuals deal directly with, or contain sections pertaining to, the oversight of derivatives activities. These documents include a recently developed Trading Activities Examination Manual; the Commercial Bank Examination Manual and its supplement; the Merchant and Investment Bank Examination Manual; the Bank Holding Company Supervision Manual; and, Guidelines and Instructions for Examinations of Edge Corporations. A brief summary of these manuals and/or the specific sections relevant to derivatives activities is presented below:

Trading Activities Examination Manual - Over the past 18 months, staff of the Federal Reserve Bank of New York, in consultation with staff of the Board of Governors (Board Staff) and other Reserve Banks, have developed a Trading Activities Examination Manual that directly addresses the supervision of trading and customer accommodation activities, with special emphasis given to derivative instruments. This manual, which is presented as Item 4 of the Supplementary Material, is currently undergoing field testing. While the manual is largely a codification of current procedures, it also enhances some current examination practices and initiates new supervisory approaches in light of the various

regulatory and industry studies that have been conducted over the past several years. The manual takes a comprehensive approach to evaluating an institution's derivatives activities and provides examination procedures for evaluating its organizational structure, front- and back-office operations and systems, approaches to market and credit risk measurement, and its overall risk management function pertaining to derivatives activities.

Commercial Bank Examination Manual - Item 5 of the Supplemental Material contains those sections of the Federal Reserve's Commercial Bank Examination Manual that either deal with or have elements addressing derivatives activities. Sections 412 and 405 are currently under revision in anticipation of regulatory, policy and accounting disclosure initiatives regarding interest rate risk, Financial Accounting Standards Board (FASB) - Accounting Standard No. 115, FASB Interpretation No. 39, and related matters. The specific sections of the Commercial Bank Examination Manual that deal with derivatives activities are noted below.

- Section 303 - Presents examination procedures for assessing capital adequacy for both on- and off-balance-sheet instruments.
- Section 405 - Presents examination procedures for effectively assessing the institution's funding practices, with particular emphasis on liquidity and interest rate risk management.
- Section 412 - Presents examination procedures for evaluating off-balance-sheet items and discusses measures of current and potential risk exposure, funding sources, and adequacy of management and controls.
- Section 413 - Presents examination procedures for evaluating asset-backed securities and securitization activities.

- Section 700 - Presents examination guidelines, objectives, and procedures for assessing the international operations of banking organizations. This section includes examiner guidelines for evaluating banker's acceptances, letters of credit, guarantees, foreign exchange activities, and LDC asset swaps and options.
- Section 900 - Presents examination guidelines on evaluating the internal controls used in conducting foreign exchange activities.

Merchant and Investment Bank Examination Manual (Supplement to Commercial Bank Examination Manual) - This manual is presented as Item 6 of the Supplementary material. Published in 1988, the manual provides specific examination objectives and procedures for evaluating the activities of merchant and investment bank subsidiaries of U.S. banking organizations. Activities addressed by this manual include: 1) asset sales, securitization and loan syndication; 2) interest rate and currency swaps and forward rate agreements; and 3) financial futures and options, and foreign currency options. Although this manual directly targets the examination of merchant and investment bank subsidiaries, many of the activities discussed are common and permissible for other offices of a parent organization. Therefore, examiners have used these or similar procedures to examine these activities wherever they have been encountered in a U.S. bank or bank holding company.

Bank Holding Company Manual - Item 7 of the Supplemental Material contains those sections of the Federal Reserve's Bank Holding Company Examination Manual that either deal with or have elements addressing derivatives activities. As with the

Commercial Bank Examination Manual, several of the following sections are being revised and updated to reflect recent initiatives.

- Section 2130 - Presents examination procedures for evaluating futures, forwards, and option activities.
- Section 2185 - Presents examination guidance for performing inspections of nonbank subsidiaries of bank holding companies that have been authorized to underwrite and deal in certain debt and equity securities ("ineligible securities") that cannot be underwritten or dealt in by member banks directly.
- Section 2190 - Presents examination procedures for evaluating the risk exposure of an institution's asset-backed securities activities.
- Section 3000 - Presents examination guidelines for evaluating nonbanking activities, including the bank's role as an advisor on interest rate swaps, caps and currency swaps.
- Section 3250 - Presents examination guidelines for evaluating futures commission merchant subsidiaries of bank holding companies, which engage in a variety of permissible activities, including clearing of certain futures contracts and giving investment advice on financial futures and options on futures.
- Section 3600 and 3700 - Present examination guidelines for evaluating other nonbanking activities which the Board has approved or disapproved on an individual basis, some of which relate to derivative products.

Guidelines and Instructions for Examinations of Edge Corporations - Item 8 of the Supplemental Material contains those derivative-related sections of the examination

manual used by Federal Reserve examiners in conducting examinations of highly specialized international banking organizations.

- Section E - Presents examination procedures for analyzing and assessing recent innovations and new financial instruments with emphasis on inherent risks and impact on profitability.
- Section R - Presents examination procedures for evaluating foreign exchange transactions, including currency swaps.

Specialized Examinations - In conducting specialized examinations of trust departments, Federal Reserve examiners also evaluate the use of derivative instruments in customer accounts to ensure that their use is in accordance with applicable fiduciary principles, laws, and regulations. Item 9 contains the relevant sections of the Federal Reserve's Trust Examination Manual.

Customized Examination Procedures - The examination policies and procedures presented in the various supervisory manuals form a basis for conducting consistent and objective examinations of varying levels. In smaller institutions some procedures may not apply, resulting in a somewhat condensed examination process than that set forth in the technical manuals. Conversely, in larger institutions additional procedures are incorporated into the process to effectively examine their complex and sophisticated activities, organization, controls, and reporting and accounting systems.

The scope of any additional procedures is determined by the examiner-in-charge and depends on the individual institution being examined. An important element in determining the scope of an examination is the first-day letter, which represents the initial

request for the specific information that the institution is required to make available at the onset of an examination. In an effort to offer further insight into the scope of examinations conducted at larger institutions and, in particular, the attention given to derivatives activities, Item 10 of the Supplementary Material presents an actual first-day letter used in the recent examination of a large institution with significant derivatives activities. The letter illustrates the comprehensive scope with which Federal Reserve examiners begin their evaluation of derivatives activities.

Reporting Requirements for Derivatives Activities - The primary regulatory financial statements for federally-insured commercial banks and savings banks are the quarterly Reports of Condition and Income, commonly referred to as Call Reports, which are currently required to be filed in a manner generally consistent with generally accepted accounting principles (GAAP). These reporting requirements are determined by the Federal Reserve and the other federal banking agencies ("agencies") under the auspices of the Federal Financial Institutions Examination Council (FFIEC). Item 11 of the Supplementary Material presents the specific Call Report schedules and reporting instructions used to collect information on the derivatives activities of commercial banks. Bank holding companies provide similar data to the Federal Reserve in the quarterly Y-9C report, which is required to be filed in a manner consistent with GAAP. The Y-9C provides information on derivatives and is presented in certain reporting schedules (Item 12 of the Supplementary Material.)

Both reports disclose the notional values of foreign exchange and interest rate derivative instruments including swaps, futures and forward contracts, option contracts and similar contracts involving commodities and equities. Information on the replacement costs

of interest rate and foreign exchange contracts that have a positive market value to the reporting entity are also collected in both reports for the purposes of calculating risk-based capital requirements. Both reports are generally available to the public.

In addition to these financial statements, the FFIEC 035 report collects information on individual bank foreign exchange positions and is widely used by examiners as a supervisory tool (Item 13 of the Supplementary Material). The 035 report is filed at the end of each month by approximately 125 banks, bank holding companies and foreign bank branches in the United States with $1 billion or more in foreign exchange commitments. The report includes information on foreign exchange activity in the six major currencies or currencies in which the reporter has a position greater than $50 million.

Beginning in 1994, reports filed pursuant to the mandate of Section 112 of FDICIA will provide additional insight into the derivatives activities of banks and bank holding companies. Under Section 112, state member banks with total consolidated assets of $500 million or more will have to submit to the Federal Reserve annual reports containing audited financial statements prepared in accordance with GAAP; alternatively, consolidated financial statements can be filed by the bank holding company ("FDICIA Section 112 annual reports"). As discussed more fully in the response to question 1.) b.), these publicly available annual reports will provide additional information on bank and bank holding company derivative positions.

Examiner Training - As with other banking activity and examination topics, examiner expertise in the area of derivatives activities is developed through an apprenticeship program that combines various types of formal educational programs in conjunction with on-the-job training under the supervision of senior examiners. Educational programs are offered at four

basic levels: as part of the core curriculum offered to all examiners; in educational programs targeted at specialized examiners; through attendance at outside conferences and educational programs; and, through customized seminars on topics for advanced-level examiners. As requested in the footnote to Question 1, the following discussion summarizes the derivatives training offered to examiners.

Core Curriculum - The Federal Reserve core curriculum of courses that an individual must complete to be considered for "examiner" status consists of a series of four Examiner Training Schools that are commonly referred to as ETS I through ETS IV.

ETS I is the first level of examiner training and is normally attended by examiners within their first six months of employment. It contains two four-hour segments on examining banks' use of investment securities and offers a brief introduction to certain derivative products that are used to hedge investment securities. The pertinent material from this course is presented as Item 14 in the Supplementary Material.

ETS II contains two intermediate presentations on the measurement and management of interest rate risk and on hedging with interest rate swaps, futures and caps. Item 15 contains the training material used in these two presentations.

ETS III is devoted entirely to the evaluation of loan credit quality and does not discuss derivative instruments. ETS IV is an advanced program and contains a three hour segment on swaps, futures and options. Item 16 of the Supplementary Material contains the training material on derivatives used in ETS IV.

Specialized Courses and Conferences - Three formal courses and three seminars are regularly offered to examiners who require special training in derivatives and related areas. The "Basic International Banking Self-Study Course" (presented as Item 17)

discusses all aspects of international banking and contains two modules that pertain to derivatives. A module on foreign exchange trading discusses the use of forwards, futures, and swaps for managing foreign exchange and interest rate risk. A second module on capital markets operations discusses hedging with derivatives in detail, including the use of interest rate caps and floors.

An additional course sponsored by the FFIEC and titled the "International Banking Course" contains three days of lectures on foreign exchange and interest rate risk, and the tools (futures, forwards, options, and swaps) used to manage those risks (see Item 18 of the Supplementary Material).

To facilitate the implementation of Section 305 of FDICIA and to ensure that examiners have a fundamental understanding of basic capital market instruments, Federal Reserve staff has developed a one week course titled "Interest Rate Risk and Securities Activities" (Item 19 of the Supplementary Material). This course contains a one day presentation on the fundamentals of how banks use swaps, futures, forwards, options, caps, and floors and related interest rate risk and accounting issues. This course will be offered to all Federal Reserve examiners over the next eight to twelve months as a "refresher" course in preparation for implementing Section 305 of FDICIA.

Three specialized conferences that address derivatives activities are regularly offered on an interagency basis through the FFIEC. The "Off-Balance-Sheet Risk" conference (Item 20) is a three and one-half day lecture/discussion targeted at examiners that regularly participate in examinations of the capital markets sections of large money center banks. Topics covered include derivative products and risk management systems. The "Risk Management Planning" conference (Item 21) is a one and one-half day lecture on banks' risk-

management process. The "Payments System Risk" conference (Item 22) is a one and one-half day lecture for examiners on how to evaluate payments risk. In addition, a one-week "Emerging Issues" conference (Item 23) provides information on various issues relating to derivatives activities.

Courses from Private Organizations - Federal Reserve examiners have also benefited from several courses on derivatives that have been offered by private institutions. Over the past several years Federal Reserve examiners have attended the International Treasury and Capital Markets Seminar that is conducted by the audit staff of Chase Manhattan Bank. This two-week course focuses on the analytical fundamentals of foreign exchange and interest rate derivative products, appropriate internal control systems within the risk management process, techniques of risk management, and auditing considerations regarding the risk-management function (Item 24 presents an outline of this course).

Many examiners have also benefited from a three-day course offered by the Options Institute of the Chicago Board Options Exchange (Item 25 presents an outline of this program). This course describes how the option exchanges work and discusses basic option strategies.

In addition to the various industry conferences and seminars on derivatives sponsored by industry associations and academic institutions, Federal Reserve staff has also attended several seminars on derivatives that have been produced directly for regulatory personnel on a one-time basis by industry associations and individual institutions. One example is a four day seminar titled "Derivatives for Regulators" that was sponsored by the Federal Reserve Bank of Chicago with cooperation from industry practitioners. The seminar

covered all aspects of derivatives including their uses and risk management techniques (see Item 26).

Educational Material - Specialized educational material at an advanced level has also been produced by Federal Reserve staff and has been disseminated throughout the Federal Reserve System to enhance examiners' knowledge of derivatives. Staff at the Federal Reserve Bank of Chicago has also produced several papers and product profiles discussing swaps, credit enhancements for OTC derivatives. These papers are presented as Item 27, to illustrate the types of internal material occasionally distributed to Federal Reserve personnel.

QUESTION 1)b)

The Joint Report mentions that reporting requirements disclose the notional values of certain derivatives only, and therefore, do not address the institution's actual exposures which may average approximately 2%-8% of the notional amount. What suggestions do you have for changing the reporting requirements to reflect actual exposures from derivatives activities, including, but not limited to credit exposure and market exposure? Do you feel any changes are needed?

As pointed out in the Joint Report, the growing complexity of the derivatives markets have caused the Federal Reserve to re-examine its informational needs. This re-examination includes all of the information sources used in the supervisory process. To this extent it is important to note that the Federal Reserve's primary source of information on the risk exposures of the derivatives activities of banks and bank holding companies is the annual on-site examination. The information gained through examinations is supplemented with that obtained from periodic communications between supervisory staff and bank management between examinations and with data on exposures filed in the quarterly Call and Y-9C reports.

As pointed out in the response to Question 1)a), information on both notional values and replacement costs on interest rate and foreign exchange contracts is currently collected in the Call Report and Y-9C Report. A number of enhancements to this data are being considered. In particular, enhanced information to assess market risks, concentration of counterparty exposures and the risk reducing effects of legally enforceable netting contracts is under consideration. Because much of the derivatives activity is conducted among a relatively small number of institutions, care is being taken to ensure that any reporting changes are appropriately targeted and do not cause undue reporting burdens on the vast majority of banking institutions that make little or no use of derivative instruments.

The current proposal on interest rate risk developed in response to section 305 of FDICIA (Item 2 of the Supplementary Material) illustrates this attempt to weigh supervisory needs and regulatory burden. Institutions with little derivative activity and that otherwise appear to have little interest rate risk would be exempt from any additional reporting. Those with a notional value of derivative contracts in excess of 10 percent of assets would be required to report expanded data to enhance the supervisory assessment of the market risk of their interest rate contracts. Moreover, one alternative of the proposal would allow, and in some cases may require, reporting the risk profiles of interest rate derivative contracts under explicitly defined scenarios using the institution's internal models. Similar types of scenario testing for foreign exchange contracts might also be incorporated into existing reports if the BIS proposal on foreign exchange (Item 3) is implemented.

The implementation framework of the new audited annual reports required by Section 112 of FDICIA will also enhance available data on derivatives activities. As part of these audited financial statements, banks and bank holding companies will be required to disclose additional information on their off-balance-sheet financial instruments[10] that have a

[10] Under GAAP, a financial instrument is defined as cash, evidence of an ownership interest in an entity, or a contract that both:

a. Imposes on one entity a contractual obligation (1) to deliver cash or another financial instrument to a second entity or (2) to exchange other financial instruments on potentially unfavorable terms with the second entity;

b. Conveys to that second entity a contractual right (1) to receive cash or another financial instrument from the first entity or (2) to exchange other financial instruments on potentially favorable terms with the first entity.

This definition includes off-balance-sheet derivatives, except for those that permit or require settlement by delivery of commodities.

risk of accounting loss.[11] The information to be disclosed includes:

- The face, contract, or notional principal amount;
- The nature and terms of the instruments along with a discussion of their credit and market risk, cash requirements, and related accounting policies;
- The accounting loss the entity would incur if any party to the financial instrument defaults and the collateral or other security, if any, for the amount due proved to be of no value to the entity; and
- The entity's policy for requiring collateral or other security on financial instruments it accepts and a description of collateral on instruments presently held.

In addition, banking organizations will disclose information about significant concentrations of credit risk from individual counterparties or groups of counterparties for all financial instruments, including derivatives. Finally, banking organizations will be required to disclose the fair value of financial instruments, including derivatives, for which it is practicable to estimate fair value. When estimating fair value is not practicable, then the banks must disclose descriptive information pertinent to estimating the value of these instruments.

Moreover, under section 112 of FDICIA, the Federal Reserve Board and the other Federal banking agencies were given the authority to require that the audited annual reports of banking institutions include any disclosures, in addition to those required by GAAP, that were deemed necessary. The agencies are actively exploring whether additional

[11] According to GAAP, the risk of accounting loss from a financial instrument includes (a) the possibility that a loss may occur from the failure of another party to perform according to the terms of a contract (credit risk), (b) the possibility that future changes in market prices may make a financial instrument less valuable or more onerous (market risk), and (c) the risk of theft or physical loss. Institutions are only required to disclose the information noted here for the risk of accounting loss that arises from credit risk and market risk.

disclosures should be required on derivatives activities in these reports.

Other potential enhancements to existing reports include additional information on the credit exposures arising from derivative instruments that are excluded from information currently reported such as the replacement cost of short dated futures and foreign exchange. Additional information that would help to assess potential concentrations of counterparty credit risk, including data on collateralized contracts, would be helpful for surveillance purposes. Incremental information that would differentiate derivatives used for hedging purposes from other derivatives and that would identify the related impact of each category on bank earnings and balance sheets as well as any deferred hedging losses or gains could also be useful. Federal Reserve staff is currently considering initiatives along these lines. However, in pursuing these potential enhancements to existing reports, the basic trade-off between regulatory burden and supervisory concerns remains paramount. The implementation of any such reporting enhancements for commercial banks would be done through the FFIEC with suitable public comment.

Question 1)c)

The Joint Report states that "...some reporting changes are under consideration. In particular, agency staff is reviewing the extent to which bilateral netting arrangements should be reflected in the reporting of replacement cost exposures. In addition, current efforts on interest rate risk in response to Section 305 of FDICIA will require increased disclosure of derivative exposures, and Section 308 requires banks to establish standards to evaluate their exposures to weak institutions, including those arising from derivative products."

Please provide a detailed update on these and other reporting changes currently under consideration by your agency.

Several specific initiatives, including the proposal on netting arrangements and the implementation of Sections 305 and 308 of FDICIA, are currently underway that would require expanded reporting of derivatives activities and their impact on bank balance sheets. The following discussions present detailed updates of each of these initiatives. Several were briefly touched on in the response to Question 1.)b).

Netting Arrangements - In April 1993, The Basle Committee on Banking Supervision, which includes supervisory authorities from 12 major industrial countries, issued for public comment a consultative proposal on netting (contained in Item 3) with a consultation period extending to December 31, 1993. The netting proposal would expand, under carefully defined conditions, the terms of the 1988 Basle Capital Accord by allowing the use of bilateral netting in the determination of the capital requirement for foreign exchange and interest rate contracts. If adopted in the United States, the proposal would allow domestic banking institutions to benefit from U.S. law, which appears to provide sufficient certainty regarding the enforceability of netting arrangements, and to report exposures on a net basis, thereby lowering, when appropriate their capital requirements. To accommodate this proposed change, the U.S. banking agencies expect to issue a formal Notice of Proposed

Rulemaking on bilateral netting within the next several months. Specific reporting changes recognizing netting will be considered once the comment period has ended and the rule is finalized.

Section 305 of FDICIA - On September 14, 1993, the federal banking agencies issued for public comment a Notice of Proposed Rulemaking on interest rate risk in response to Section 305 of FDICIA (Item 2 of Supplemental Material). The proposal advances a specific treatment for assessing the interest rate risk of derivatives activities in the context of the overall interest rate risk of a bank. As proposed, institutions with a notional value of off-balance-sheet interest rate contracts amounting to more than 10 percent of total assets would be required to report additional data on their derivative positions to enable supervisory assessment of the interest rate risk exposure of the positions and their contribution to the overall risk profile of the institution. Specifically, the notional values of interest rate swaps, futures and forwards and the delta-equivalent values of options, caps and floors would be reported across maturity time bands and used within a supervisory risk weighting methodology to estimate the potential change in the value of these instruments for a designated interest rate scenario. The proposal also offers institutions an alternative approach to evaluating their interest rate risk, including that related to derivatives activities, that would allow such institutions to report the change in value of their assets, liabilities and off-balance-sheet contracts under a specified interest rate scenario using the institution's own internal models. Such estimates, including the underlying assumptions used, would be subject to examiner review for acceptability prior to their use for capital adequacy purposes.

The proposal, which is presented as Item 2, presents a more in-depth discussion of the treatment of interest rate derivative contracts. After a 45 day comment period, the

agencies will develop a final rule for implementation in 1994.

Section 308 of FDICIA - Effective December 19, 1992, Regulation F implemented Section 308 of FDICIA, which required the Federal Reserve to prescribe standards to limit the exposure of insured depository institutions to other depository institutions. As implemented, Regulation F requires banks, savings associations, and branches of foreign banks with deposits insured by the Federal Deposit Insurance Corporation to develop and implement internal prudential policies and procedures for evaluating and controlling credit exposure to depository institutions with which they do business.

The regulation also establishes a general limit, stated in terms of the exposed bank's capital, for overnight credit exposure to an individual depository institution, unless the bank can demonstrate that the institution is at least "adequately capitalized." Credit exposure to a depository institution includes assets and off-balance-sheet items against which the exposed bank must carry capital under the risk-based capital adequacy guidelines. No limit is specified on exposure to institutions at least adequately capitalized, but a bank is required to establish and follow its own internal policies and procedures with regard to exposure to all depository institutions, regardless of capital level. Regulation F is being enforced through the examination process and will not require any reporting changes.

FFIEC Proposal on Implementing Section 121 of FDICIA - Section 121 of FDICIA requires that the federal banking and thrift agencies develop supplemental standards for disclosure of the fair market values of assets and liabilities of insured depository institutions. In April of 1993, the agencies issued a proposal for public comment for a 60-day period ending June 14. The proposal would require institutions with total assets of $500 million or more to disclose the fair values (i.e., estimated market values) of their assets,

liabilities, and off-balance-sheet financial instruments in their audited annual reports. It also requested comment on the feasibility of providing their fair-value disclosures in bank Call Reports, perhaps using a condensed format. The agencies are currently reviewing the comments that the FFIEC received on this proposal.

Financial Accounting Standards Board Interpretation No. 39 - The Federal Reserve and the other agencies, under the auspices of the FFIEC, are considering adopting Financial Accounting Standards Board (FASB) Interpretation No. 39 (FIN 39), *Offsetting of Amounts Related to Certain Contracts*, solely for balance sheet items arising from off-balance-sheet derivative instruments. Under the new FIN 39 rules, the FASB reaffirmed the long-standing tenet that, in general, offsetting (or netting) of assets and liabilities among different counterparties is improper. In releasing its authoritative interpretation, the FASB provided guidance on those limited circumstances when netting is permissible, particularly for off-balance-sheet transactions.[12] Adoption of FIN 39 would improve the reporting of certain credit exposures arising from derivatives in bank Call Reports by clarifying the potential for

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[12] Offsetting of assets and liabilities in the balance sheet is improper, except when all of the following four conditions are met:

1. Two parties owe each other determinable amounts;
2. The reporting entity has a right to set off its obligation with the amount due to it;
3. The reporting entity actually intends to set off these amounts; and
4. The right of set off is enforceable by law.

The third condition, that is intent to apply set off, is not required for off-balance-sheet instruments contracts that have been executed with the same counterparty under a legally enforceable master netting agreement.

When these criteria have been met, a banking organization (or other company) may offset the related asset and liability (including the fair values associated with derivative contracts) and report the net amount. On the other hand, if these criteria have not been met, the fair value of contracts in a loss position will not be offset against the fair value of contracts in a gain position, and organizations will be required to record gross unrealized gains on such contracts as assets and gross unrealized losses as liabilities.

inappropriate accounting netting practices. If approved, FFIEC reporting guidance consistent with FIN 39 would become effective beginning with 1994 Call Reports.

No final decisions on the reporting aspects of any of the initiatives described above have yet been made by the banking agencies. Moreover, any changes to the Call Report arising from these initiatives would generally be subject to public comment before actual implementation.

Question 1)d)

Please discuss issues regarding payment, clearing, and settlement being considered by the Payment and Settlement Committee organized by the Federal Reserve Bank of New York, and issues being considered by the Committees formed by the Board of Governors of the Federal Reserve and the Federal Reserve Bank of New York mentioned in the Joint Report.

The integrity and reliability of the payment system is a key concern for the Federal Reserve, because of its importance to both financial stability and the Federal Reserve's ability to implement monetary policy. Derivatives-related payments activity is one of a number of factors influencing the day-to-day functioning of the payment system. In some instances, derivatives can directly involve sizable payment-related activity, such as deliveries of currencies under forward foreign exchange contracts. In other instances, the direct payment-related activity arising from derivative contracts may be more modest, such as settlements for contracts calling for a single payment based on the difference between two interest rates. Indirectly, derivatives may be associated with sizable payment activity such as through the clearing and settlement of securities that hedge, or are hedged by, positions in derivatives.

To organize its review of payment system policy issues, the Board of Governors set up an internal committee known as the Payment System Policy Advisory Committee (PSPAC) in 1986. The PSPAC consists of three Governors and two Federal Reserve Bank Presidents who are designated by the Chairman of the Federal Reserve Board; one first vice president from the Federal Reserve System serves as an *ex-officio* member. The role of the PSPAC is to serve as a focal point for Federal Reserve System efforts regarding payment system issues and to advise the Board on major policy matters involving the payment system, such as systemic risk in payment systems, relationships between the payment

system and financial markets, access to the payment system, and implementation of the Board's payment system risk reduction policy.

Until recently, the Federal Reserve Bank of New York had focused on payments system issues through its Payments System Policy Committee, which consisted of several senior officers of that Bank. In September, the Federal Reserve Bank of New York established a new internal committee structure and payments issues will be examined by the Bank Supervision Committee and the Banking Services Committee.

A main purpose of these internal committee efforts is to bring a variety of viewpoints and disciplines--legal, supervisory, operations, and market analysis--to bear on a wide variety of payment system risk issues. As a consequence, these committees have not focussed narrowly on derivatives, although topics dealing with or closely related to derivatives would include, for example, the implementation of the netting provisions in FDICIA, private sector efforts to develop clearing houses, and other efforts to deal with cross-border and multi-currency payment risk.

The Federal Reserve also has been involved with a third group, the Payment and Settlement Committee (PSC), which was comprised of individuals from the private sector. The PSC was organized under the umbrella of the Federal Reserve Bank of New York and operated from 1991 to 1993. Personnel from the Federal Reserve, the SEC, and the CFTC attended meetings of the PSC as observers. The activities of the PSC included helping to evaluate "honest broker" arrangements at major private sector securities depositories and helping to sponsor the drafting of legislation to rationalize the bankruptcy process for financial institutions.

In the course of its endeavors, the PSC identified a number of other groups

under various auspices that were working on payment and settlement issues. Given the numerous groups addressing similar issues, it was decided that there was not a unique role for the PSC that required meeting on a formal and regular basis. In the future, the Federal Reserve Bank of New York may consult with the PSC members from time to time on payment issues.

In addition to these committees, in late 1992, the Board of Governors formed the Committee on Derivative Instruments (CDI), which consists of three Governors. Although not directly involved in payment issues, the CDI is responsible for oversight of inter-divisional staff work and advising the Board on policy issues concerning derivative instruments. The scope of the CDI's work includes the use of derivative instruments in both the financial and nonfinancial business sectors of the national and international economies. The CDI serves as a focal point for staff efforts related to derivative instruments in the areas of banking supervision and regulation, market regulation, macro-prudential policy, monetary policy, and, in conjunction with the Board's Payments System Policy Advisory Committee, payment system policy.

QUESTION 2)

Please discuss in detail capital requirements, both current and proposed, as they relate to derivatives activities of institutions regulated by your agency. Do you feel the current capital standards are adequate?

Current Capital Requirements for Derivatives

Current capital requirements for derivatives are governed by the standards of the Basle Accord that were published in 1989 and adopted into the Federal Reserve Board's capital adequacy guidelines for state member banks and bank holding companies. Their current focus is on credit or counterparty risk, rather than market risk, although banks are expected to hold sufficient capital to guard against all risks. Prospective capital standards for market risk are addressed in the proposals recently released for comment by the Basle Supervisors' Committee and in the interest rate risk proposal recently issued by the federal banking agencies. The Basle proposal is discussed below, and the interest rate risk proposal is summarized in the response to Question 1.) c.) and provided in its entirety in the Supplementary Material as Item 2.

The existing capital adequacy standards address the credit risk associated with a bank's on- and off-balance-sheet activities, including those relating to derivative instruments, which are divided into two broad categories: interest rate contracts and exchange rate contracts. Interest rate contracts include interest rate swaps, forward rate agreements, purchased interest rate options, and any other instruments that give rise to similar credit risk. Exchange rate contracts include cross-currency interest rate swaps, forward foreign exchange contracts, purchased currency options, and any other instruments that give rise to similar credit risk. Equity-based and commodity-linked derivatives are treated as exchange-rate contracts.

The capital requirement for a given derivative contract is based on its estimated "credit-equivalent amount" which consists of two parts: its current (positive) replacement cost (if relevant) and a component representing potential future exposure. This second component is calculated as a percentage of the notional value of the instrument underlying the derivative contract and is dependent on the contract's remaining maturity. The credit-equivalent amount is then assigned a risk weight that ranges from 0 to 50 percent, depending on the creditworthiness of the counterparty. For example, transactions with banks would be assigned a 20 percent weight, while those with nonfinancial corporate business would be weighted at 50 percent. Banks must maintain a minimum capital ratio of 8 percent against on-balance sheet assets and the credit equivalent amount of off-balance-sheet items, including derivative instruments. Item 1 of the Supplementary Material contains a more in-depth discussion and illustration of the Federal Reserve Board's risk-based capital guidelines for derivatives.

Proposed Capital Requirements for Derivatives

When the Basle Accord was reached in 1988, authorities recognized its limitations, including the need to develop capital standards for market risks such as interest rate and foreign exchange risks. In April, 1993, the Basle Supervisory Committee issued a series of comment papers that propose capital standards for market risks arising from a bank's traded debt and equity securities, and from their overall foreign exchange exposures, including any derivatives that are part of a bank's trading book. Concurrently, the Basle Supervisory Committee also issued a proposal that would amend the 1988 Basle Accord to recognize certain legally binding netting arrangements between counterparties (bilateral netting) on derivative products.

Basle Supervisory Committee Market Risk Proposals - The market risk proposals define capital standards for positions in traded debt securities and equities, as well as foreign exchange. The proposals are complex, and the following discussion only highlights their treatment of derivatives activities. Full details are included in Item 3 of the Supplementary Material. In general, derivatives that are part of the trading book are converted into equivalent positions in the underlying instrument and incorporated into the appropriate framework of the market risk proposal: debt securities, equities, or foreign exchange. In the case of traded options, the market risk proposals offer a number of simplified rules for players that rely on options primarily for hedging purposes.

Traded debt securities are distributed into time bands based upon their maturities and repricing periods, with the value in each time band then multiplied by a weight that reflects the estimated sensitivity of the instruments to a specific change in interest rates. Derivative instruments are treated similarly by using their equivalent positions in the underlying instruments. A capital charge is then assessed against the net open position within each time band. However, since offsetting positions may not represent perfect hedges (because of factors such as basis risk and the likelihood of nonparallel shifts in the yield curve), full offsetting is not allowed. Such "disallowances" to complete netting produce additional capital requirements. For traded equity positions, the capital charge would be based on a fairly simple short hand method of calculation.

The proposal regarding foreign exchange offers two methods for determining the capital charge: a shorthand rule based on a bank's net open foreign exchange position and a simulation method for more sophisticated banks. As with debt securities and equities, foreign exchange derivatives are generally incorporated into the framework by converting the

derivative into an equivalent position in the underlying instrument.

Netting Proposal - The netting proposal would amend the 1988 Basle Accord to recognize certain forms of bilateral netting of credit exposures, including those involving derivative instruments. Under the proposal, banks would be permitted to recognize for capital purposes, bilateral netting agreements that meet strict legal standards regarding enforceability. The proposal could lead to a significant reduction in the bank capital requirement for derivatives activities, largely reflecting the reduced counterparty risk associated with legally valid bilateral netting arrangements under so-called "master agreements."

Under the proposal, the overall capital charge for credit or counterparty risk would be based on the net positive mark-to-market value of the transactions covered by a bilateral netting arrangement, rather than on the sum of the positive mark-to-market values of each transaction. However, as under the 1988 Basle Accord, the add-on for potential future exposure would continue to be based on the underlying gross notional amount of each transaction. The Federal banking agencies are in the process of developing proposed regulations that would implement this proposal.

QUESTION 3)

Please discuss which types of derivative instruments institutions under your jurisdiction are, and are not, permitted to utilize. Please distinguish between the types of derivatives institutions are, and are not, permitted to utilize for different functions, including trading for customer accounts, trading (revenue) for their own accounts, and hedging for their own accounts. Please indicate the relative use of different derivative instruments by such institutions. In addition, please indicate the relative use of derivatives by such institutions for the different functions mentioned above.

As discussed under Question 1)a), the Board has general supervisory and regulatory authority over the activities of bank holding companies, the nonbank subsidiaries of bank holding companies, and state-chartered banks that are members of the Federal Reserve System. The Board also has authority with respect to the activities of foreign branches of member banks, Edge Act and agreement corporations, and foreign subsidiaries of bank holding companies or member banks.

State member banks As described in Question 1) a), state member banks are chartered under state law and must have authority under their state charters to engage in derivatives transactions. Generally, activities related to OTC interest rate and foreign exchange derivatives are considered to be sufficiently related to traditional bank activities in foreign exchange and the management of interest rate exposure that such activities are considered to be either a part of or incidental to such activities. State banking authorities in a number of states, therefore, have permitted state-chartered banks in their jurisdictions to engage in such transactions as brokers or agents or for their own accounts, either to generate revenue or to hedge existing positions.

State member banks in some states have been permitted to utilize exchange-traded interest rate and foreign exchange derivatives to hedge interest rate or foreign exchange exposure. In at least one state, banks are permitted to act as futures commission merchants

("FCMs"), engaging in trading for customers and for their own account in exchange-traded interest rate and foreign exchange derivatives. This activity generally takes place in a bank subsidiary.

Additionally, a limited number of state-chartered member banks engage in derivative transactions linked to commodities or equities. Some of these transactions are related to traditional bank activities in commodities such as gold and silver, but some state member banks have obtained the approval of their state regulatory authorities for activities involving a broader array of commodity-linked or equity-linked transactions. State member banks in a limited number of states (notably New York) have been permitted by state regulatory authorities to engage as principals in OTC derivatives linked to commodities or equities, and have been permitted to use exchange-traded derivatives for the purposes of hedging exposure created by OTC transactions. Additionally, banks in at least one state have been permitted to trade in commodity- or equity-linked exchange-traded derivatives for the account of customers.

The Board has required state member banks acting as principals in derivatives transactions linked to commodities or securities that they do not have the authority to purchase and hold directly to obtain the approval of the Board to continue such activities, unless the transactions are entered into on a perfectly matched basis. State member banks that currently are not engaged in such transactions will be required to seek the approval of the Board to commence such activities in the future. The Board is currently reviewing these activities. All of the above activities are also permissible for national banks.

Bank holding companies Subject to prior approval, the Board has generally permitted bank holding company subsidiaries to engage in certain foreign exchange transac-

tions, including OTC derivative transactions, either as agent for customers or for their own account for hedging purposes. Bank holding companies and their nonbank subsidiaries also are permitted to engage in either exchange-traded or OTC derivatives transactions incidental to other approved activities in order to hedge exposure arising from those activities.

Bank holding company subsidiaries also generally have been permitted, subject to prior approval, to act as FCMs in executing and clearing certain exchange-traded derivatives linked to bullion, foreign exchange, government securities, certificates of deposit, other money market instruments, and stock and bond indices, either as agent for customers or for their own account for hedging purposes. The Board has also approved one institution to trade in a group of nonfinancial futures, subject to the constraint that these activities be performed as agent for customers and not for the institution's own account except as necessary to limit damages in the event of a customer default.

In a small number of cases, the Board has permitted institutions to trade certain exchange-traded derivative instruments linked to government securities and money market indices for their own account for purposes other than hedging. The Board also has permitted a limited number of bank holding companies to engage in interest rate and currency swaps and related transactions, including swap option contracts, as principal or agent, for purposes other than hedging. One institution has been permitted to buy or sell for its own account OTC option contracts linked to government securities for purposes other than hedging.

Foreign branches of member banks Generally, a foreign branch of a member bank is permitted to engage in all of the activities authorized under the bank's charter. To the extent permitted under local law, foreign branches of a national bank may engage in the full range of OTC derivative transactions permitted under the bank's charter. Foreign

branches of a state member bank may also engage in such activities consistent with its charter, subject to the Board's approval with respect to commodity- and equity-linked transactions.

Edge and agreement corporations Domestically, an Edge or agreement corporation may engage in foreign exchange activities, which may include derivatives transactions. Outside of the United States, such corporations, usually through subsidiaries, may act as FCMs to engage in transactions for the account of customers or for their own account for hedging purposes, and may act as a principal or agent in swap transactions for hedging or trading purposes, subject to the approval of the Board for transactions linked to commodities.

Foreign subsidiaries of bank holding companies As with Edge corporations, foreign subsidiaries of bank holding companies may act as FCMs to engage in transactions in exchange-traded derivatives for the account of customers or for their own account for hedging purposes, and may act as a principal or agent in swap transactions, subject to the approval of the Board for transactions linked to commodities.

Foreign banking organizations with operations in the United States. A federal branch of a foreign bank generally may engage in the same derivatives activities as a national bank. State-licensed branches or agencies may engage in derivatives activities permitted by their state licensing authority, and at least one state that has permitted state-chartered banks to engage in a broad range of derivatives activities has also permitted state-licensed branches and agencies to engage in the same activities. The non-banking operations of a foreign banking organization that maintains a branch, agency, or subsidiary bank in the United States are subject to the same limitations on derivatives activities as U.S. operations of domestic bank holding companies.

Relative use of different derivative instruments The bank Call Report and related bank holding company reports currently include two principal measures of activities in different types of derivative contracts. First, the reports collect data on the notional values of all outstanding exchange-traded and OTC interest rate contracts, foreign exchange contracts, and contracts on other commodities and equities.[1] Second, the reports also provide information on notional values and replacement costs for OTC interest rate and foreign exchange derivatives.[2]

Information regarding notional values and replacement costs provide a good indication of the extent to which institutions use financial derivatives, although not their specific purpose. Such information is available in bank Call Reports and on Y-9C reports submitted by bank holding companies. Data on the notional value of derivative products of bank holding companies and state member banks are presented in Tables 1 and 2, respectively. Overall, the notional value of interest rate derivatives contracts reported by bank holding companies amounted to some $6.0 trillion as of June 30, 1993. The notional value of all bank holding company foreign exchange contracts totaled approximately $4.5 trillion while commodity and equity contracts amounted to $243 billion.

As pointed out in the Joint Study, the notional amounts of derivative contracts do not provide a useful measure of credit exposure. Rather, replacement costs are a more appropriate measure of current credit exposure. The replacement cost of derivative contracts

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[1] Interest rate contracts and contracts on other commodities and equities generally are broken down into four categories: 1) swaps; 2) futures and forwards; 3) written option contracts; and 4) purchased option contracts. Similar data is collected for foreign exchange contracts, except that the category covering futures and forwards also covers all commitments to purchase foreign exchange, including spot transactions.

[2] Foreign exchange contracts with an original maturity of fourteen days or less are excluded.

reported by banking institutions amounted to $157 billion as of June 30, 1993 (about 1.4 percent of the notional amount).

As of June 1993, 215 of the 1,514 bank holding companies that file the Y-9C, reported some from of derivatives activity. Of the total 1,514 companies, 151 (10 percent) reported some interest rate swaps, and 120 (8 percent) reported commitments to purchase foreign exchange in the form of spot, forward, and futures contracts. The foreign exchange activities of most of these institutions are limited to spot and forward contracts. The number of institutions that engage in all other types of derivatives activities is much smaller than those for swaps or foreign exchange. Only 13 companies, for example, report any holdings of commodity or equity swaps.

Large institutions dominate the domestic U.S. banking industry's activity in derivatives markets with the 10 largest holding companies, ranked by the notional value of derivatives contracts, holding over 90 percent of total derivatives reported by U.S. bank holding companies (Table 3). In terms of notional amounts, most bank holding company involvement in derivatives contracts comprises interest rate swaps (22 percent), domestic futures or forward rate contracts (19 percent), and spot, future, or forward exchange contracts (34 percent). Bank holding company involvement in commodity and equity contracts represent less than 2.2 percent of the reported total. The pattern of concentration and mix of activity is similar among state member banks (Table 2).

In all cases, the volumes represent contracts in which the reporting institution served as a principal to the transaction; brokered transactions are not reported. However, existing regulatory reports do not indicate specific purposes of the transactions, for example whether

they are held in the institution's trading account or were created to hedge a nontrading exposure.

The combined effect of these and other positions on an institution's interest rate risk would, however, be identified from reporting requirements currently proposed by the banking agencies. Even then, such additional information may not focus on trading versus nontrading activities, but the information would highlight whether the positions increased or reduced consolidated exposures.

Table 1

Volume of Derivatives Activities at U.S. Bank Holding Companies and Number of BHCs Reporting Derivatives Activities

Item Name	BHCs > $10 Billion in Assets		BHCs < $10 Billion in Assets		All BHCs	
	Notional Value ($ Millions)	Number of BHCs	Notional Value ($ Millions)	Number of BHCs	Notional Value ($ Millions)	Number of BHCs
Interest Rate Contracts						
Swaps	2,348,068	55	18,326	96	2,366,394	151
Futures/Forwards	2,069,680	47	10,720	47	2,080,400	94
Options (Written)	793,708	45	4,060	21	797,767	66
Options (Purchased)	779,573	47	5,907	31	785,480	78
Total	5,991,028		39,013		6,030,041	
Foreign Exchange Contracts						
Swaps	287,623	26	104	2	287,727	28
Futures/Forwards	3,642,592	55	3,104	65	3,645,696	120
Options (Written)	261,096	28	13	4	261,109	32
Options (Purchased)	254,889	28	12	3	254,902	31
Total	4,446,201		3,233		4,449,434	
Commodity & Equity Contracts						
Swaps	26,375	12	1	1	26,376	13
Futures/Forwards	95,144	13	357	5	95,501	18
Options (Written)	80,210	10	14	5	80,223	15
Options (Purchased)	40,368	12	22	3	40,390	15
Total	242,097		393		242,490	

Source: Consolidated Financial Statements for Bank Holding Companies (FR Y-9C), June 30, 1993 data.

Table 2

Volume of Derivatives Activities at State Member Banks and Number of State Member Banks Reporting Derivatives Activities

Item Name	SMBs > $10 Billion in Assets		SMBs < $10 Billion in Assets		All SMBs	
	Notional Value ($ Millions)	Number of SMBs	Notional Value ($ Millions)	Number of SMBs	Notional Value ($ Millions)	Number of SMBs
Interest Rate Contracts						
Swaps	1,380,492	12	19,275	51	1,399,767	63
Futures/Forwards	1,278,702	10	11,412	16	1,290,114	26
Options (Written)	549,819	11	5,539	12	555,358	23
Options (Purchased)	441,518	11	9,182	13	450,699	24
Total	3,650,530		45,408		3,695,938	
Foreign Exchange Contracts						
Swaps	170,038	5	1	1	170,040	6
Futures/Forwards	1,458,172	12	1,560	22	1,459,732	34
Options (Written)	132,202	6	240	4	132,442	10
Options (Purchased)	127,412	6	255	4	127,666	10
Total	1,887,824		2,056		1,889,879	
Commodity & Equity Contracts						
Swaps	18,973	3	0	0	18,973	3
Futures/Forwards	19,627	4	51	1	19,678	5
Options (Written)	27,380	3	0	0	27,380	3
Options (Purchased)	29,672	3	0	0	29,672	3
Other \1	N/A	N/A	22	1	22	1
Total	95,653		73		95,725	

\1 Banks with assets less than $300 million do not report commodity and equity contracts by type of contract.
Source: Consolidated Financial Reports of Condition and Income, June 30, 1993 data.

Table 3

10 HOLDING COMPANIES WITH THE MOST DERIVATIVE CONTRACTS

June 30, 1993, Notional Amounts, $ Millions

Rank	Holding Company Name	State	Assets	Total Derivatives	Total Futures & Forwards	Total Swaps	Total Options
1	CHEMICAL BANKING CORPORATION	NY	$145,522	$2,117,385	$1,245,500	$554,257	$317,628
2	BANKERS TRUST NEW YORK CORPORA	NY	83,987	1,769,947	816,740	355,597	597,610
3	CITICORP	NY	216,285	1,762,478	1,207,132	264,811	290,535
4	J.P. MORGAN & CO. INCORPORATED	NY	132,532	1,550,680	572,897	579,219	398,563
5	CHASE MANHATTAN CORPORATION	NY	99,085	1,125,075	666,150	258,086	200,839
6	BANKAMERICA CORPORATION	CA	185,466	899,783	581,034	229,926	88,823
7	FIRST CHICAGO CORPORATION	IL	49,936	452,780	276,790	100,666	75,324
8	CONTINENTAL BANK CORPORATION	IL	22,352	170,052	61,058	52,953	56,041
9	REPUBLIC NEW YORK CORPORATION	NY	36,205	164,979	81,707	45,504	37,768
10	BANK OF NEW YORK COMPANY, INC. T	NY	41,045	91,434	65,128	12,200	14,106
	Top 10 Holding Companies			10,104,592	5,574,136	2,453,219	2,077,236
	Other 205 Holding Companies			617,374	247,461	227,278	142,574
	Total Notional Amount for All Holding Companies			10,721,965	5,821,597	2,680,497	2,219,811

Note: Table includes data for companies with total assets of $150 million or more, or with more than one subsidiary bank.
Source: Consolidated Financial Statements for Bank Holding Companies (FR Y-9C)

QUESTION 4)

Please discuss the benefits that may be realized from utilizing derivative instruments, such as using them for risk management and asset-liability management purposes. Could the development and use of derivative products by savings and loans (S&Ls) and others have helped to prevent the S&L crisis? For example, could the use of interest rate swaps by S&Ls have helped them to sufficiently control duration and interest-rate mismatches? (Especially mismatches due to long-term mortgage assets yielding low interest rates being combined with short-term liabilities commanding high interest rates.)

Derivative instruments, both exchange-traded and over-the-counter (OTC), are risk management tools that allow users to manage their exposure to various types of risk, such as interest rate risk, currency risk, equity price risk, or commodity price risk. For the vast majority of U.S. financial institutions the present use is to manage interest rate risk. The primary advantage of derivatives is their ability to alter the risks on the balance sheet more quickly and cheaply than could be done through adjustments of traditional assets or liabilities. For example, an institution with an exposure to rising short-term interest rates could more promptly and economically sell Eurodollar futures or exchange fixed rates for floating rates through an interest rate swap than shorten the duration of its assets or lengthen the duration of its liabilities. Either exchange-traded or OTC derivatives could be employed to manage risks, but the relative merits of using either instrument depend on the specific objecti and capabilities of the institution. The customized nature of OTC derivatives allows interest rate risk to be managed more precisely, but OTC products generally involve higher transaction costs and greater credit risk than exchange-traded products.

Among the financial institutions that benefit from the use of derivative instruments are banks and savings and loans (S&L). Both institutions can use derivatives to manage the exposure arising from the differential effective maturity of their assets and liabilities, termed an asset-liability gap. S&Ls, in particular, have tended to have large gaps

deriving from their short-term, floating-rate liabilities (e.g. savings and certificates of deposits) and long-term assets (e.g. fixed-rate mortgages). When short-term interest rates rose in the early 1980s relative to the existing fixed-rate assets, the profits of the S&Ls declined and losses were incurred as the cost of short-term liabilities exceeded the earnings from the fixed-rate mortgages. Hedging this type of exposure can be undertaken by obtaining a derivative instrument that produces profits as short-term interest rates rise. For example, the sale of Eurodollar futures will produce such profits; as interest rates rise, the price of Eurodollar futures falls, generating gains that can then be used to offset the additional costs of paying depositors higher rates. Another method which would produce a similar result is to engage in an interest rate swap in which the S&L agrees to receive from a counterparty floating-rate payments based on a short-term interest rate (any rate that tends to move in concert with rates paid to their depositors) and agrees to make a periodic payment to the counterparty based on a long-term fixed rate. Used in these ways, derivatives could have helped S&Ls avoid the losses that resulted from the sharp increase in short-term interest rates in the late 1970s and early 1980s.

It should be stressed, however, that derivatives are effective tools for managing risks only if they are used properly. For any hedge to be effective, it must be placed prior to the anticipated interest rate movements. After short-term rates have already risen, the losses incurred by paying depositors higher rates have been realized. At that point, only further rises in rates can be protected against.

QUESTION 5) a)

What are your primary regulatory concerns regarding derivatives activities of institutions supervised by your agency?

The Federal Reserve's regulatory concerns regarding derivatives activities relate principally to their volume and complexity, which affects both the ability of examiners to evaluate a bank's activities and the ability of bank management, itself, to identify, understand, and control the risk management process. These concerns extend to the evaluation of capital adequacy, the adequacy of internal systems and controls, and any potential effects on interbank clearings and systemic risk. Although the Federal Reserve believes derivatives activities are currently conducted in a generally sound and prudent manner, the size, complexity and rapid growth of these markets demand that these activities receive increased supervisory attention.

The Joint Report noted that the risks associated with derivatives--counterparty credit risk, market risks, legal risks, and operating risks--were essentially the same risks that banks have traditionally managed. Moreover, as noted in the Group of Thirty report, derivative instruments are effectively the combination of forwards and options--again, instruments that, in concept, are not new to banks.

Nevertheless, the complexity and diversity of derivative instruments and activities combine to make risk measurement and control more difficult than that normally associated with more traditional financial instruments. These difficulties tend to be exacerbated by the rapid growth in some of these markets. These factors require banks that are highly active in derivative markets to develop new risk measurement techniques, stronger risk controls, and better management systems. Consequently, as the sophistication and complexity

of market practices increase, reviewing and understanding internal controls--and more broadly the entire risk management process--becomes more important.

Of course, another concern is that regulators might over-react to the expansion of derivatives activities and needlessly discourage activities that would reduce risk or enhance the profitability and stability of the banking industry. Before introducing additional regulations or regulatory standards, the objectives that the regulations are intended to achieve should be identified as well as whether private sector initiatives are a more effective way to meet those objectives. We should also be mindful of the potentially adverse effects of regulation on competition, efficiency, and innovation in the OTC derivatives markets. Indeed, perhaps the most important conclusion of the Joint Study cited was that regulation cannot substitute for effective risk management.

QUESTION 5) b)

Do you believe that fundamental change in the current regulatory framework for institutions using derivatives is needed at this time?

The Board believes that the current regulatory framework provides supervisors with adequate authority to address concerns about the use of derivatives by banks and bank holding companies through risk-based capital requirements and, most importantly, through general supervisory policies and procedures. This existing framework permits institutions to engage in a broad range of derivatives transactions, to innovate, and to provide valuable risk-management services to their customers and liquidity to the financial markets, while maintaining a sound banking system.

The Board has not formed a firm opinion on the adequacy of frameworks for the use of derivatives by other types of institutions not subject to supervisory oversight by U.S. or foreign financial supervisors. The Board is aware that concerns have been expressed about unregulated dealers and unsophisticated end-users and is in the process of evaluating whether regulatory changes are needed to address these concerns. In addressing these issues, the Board and other policy makers need to balance carefully the need to contain systemic risk, protect unsophisticated investors and avoid moral hazard against the need to maintain efficient and internationally competitive markets.

QUESTION 6)

Is there adequate coordination between U.S. and foreign regulators to regulate risks associated with derivatives? Does the BIS report of April 1993 address all of your agency's concerns in this area?

The global scope of derivative markets necessitates close interaction with foreign regulators. Since the mid-1970's there has been a high degree of coordination between U.S. and foreign regulators, catalyzed in large part by the efforts that led to the 1988 Basle Capital Accord. During this period, significant attention has been given to coordinating and developing minimum standards for supervising banks' off-balance-sheet activities in general and their derivatives activities in particular.

The primary forum for such international efforts has been the Basle Committee on Banking Supervision, which was established by the Central Bank Governors of the Group of Ten (G-10) countries in 1975. The member countries of the Basle Committee are Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Sweden, Switzerland, the United Kingdom, and the United States. There has also been a significant level of coordination between the Basle Committee and the European Commission, which has been working to harmonize prudential standards for banks across the European Community (EC), including standards for banks' derivatives activities. The EC Commission has maintained a representative on the Basle Committee, and contacts between the Basle Committee and the EC have been strong. In addition there have been growing contacts, both formal and informal, among the individual bank supervisors of G-10 and EC countries, particularly because there is a significant overlap in the membership of the two groups.

The most significant achievement resulting from the international coordination efforts of the Basle Committee has been the 1988 Basle Capital Accord, which defines

minimum capital standards for the credit risk arising from on- and off-balance-sheet activities of internationally active banks, including derivatives. As a result, the Accord strengthens prudential standards across the G-10 countries and provides for more competitive equality among internationally active banks. Due in large part to the strong ties between the Basle Committee and the European Commission, the EC adopted minimum capital requirements in 1989 that closely mirror the capital standards of the Basle Accord, particularly as regards the standards for banks' derivatives activities. The influence of the Basle Committee has also extended beyond the countries of the G-10 and the EC. For example, the standards of the 1988 Accord have been adopted by the bank supervisors of many countries outside of the G-10 or the EC, including a number of developing countries.

Since the signing of the Basle Accord, coordination among the members of the Basle Committee and between the Committee and the EC has remained strong, as exemplified most recently by the April 1993 release of the Basle Committee's market risk proposals for positions in traded debt securities, equities, and foreign exchange, as well as derivatives on these positions. The Basle Committee is also working to harmonize minimum capital standards for the credit and market risk of a variety of new derivative products such as commodity-based derivatives, and similar work is being carried out by the EC. For example, the EC's Capital Adequacy Directive requires that the EC Commission begin to develop a proposal for commodities trading and commodity-based derivatives. In addition, the Basle Committee is reexamining the capital weights and methodologies for off-balance-sheet activities contained in the 1988 Capital Accord with a view to refining these standards and expanding their scope to include new derivative instruments. Finally, over the long-run, the Basle Committee is considering the question of accounting standards for derivatives activities.

given that accounting rules for these activities have tended to lag behind the rapid pace of financial innovation.

In developing the market risk proposals, the Basle Committee coordinated closely with the European Commission, which was in the process of drafting the Capital Adequacy Directive (CAD) for the market risks of banks' and securities firms' trading activities. Though there are some differences between the CAD and the market risk proposals, they are similar in methodology and with respect to many of their details. Moreover, the CAD, which was adopted by the EC Council last year, contains a provision that requires a review of its standards within three years to account for any significant developments that may have taken place as a result of the Basle Committee's proceedings.

The Basle Committee also has begun to establish closer ties with the International Organization of Securities Commissions (IOSCO). Although these ties did not lead to a joint market risk paper, as was originally intended, the contacts between the two groups represent a significant step towards strengthened coordination among regulators of different financial services industries whose financial institutions engage in many of the same activities. The Basle Committee continues to seek closer coordination with securities regulators. Although the Basle Committee has moved ahead to release its market risk proposals in the absence of a formal agreement with IOSCO, the proposals have been devised with a view to convergence with securities regulators sometime in the future. For example, the market risk proposals would allow banks to rely on more short-term subordinated debt to back their trading and derivatives activities, bringing the capital standards of banks closer to those of securities firms.

The 1988 Basle Accord and the market risk proposals of April 1993 provide a

sound framework for addressing the credit and market risks associated with the derivatives activities of large internationally active banks. Moreover, as noted above, there are a number of areas in which the Basle Committee continues to work to strengthen international standards for banks' trading and derivatives activities.

While the harmonization of standards is clearly important and needs to proceed further, equally important is the close working relationship established among supervisors. This permits closer cooperation in dealing with *ad hoc* situations affecting individual institutions or specific markets. In the case of the Federal Reserve, these contacts at the supervisory level are enhanced by contacts with the foreign central banks regarding other matters such as payments and settlement systems.

In addition to the various efforts by regulators to enhance and coordinate the standards they set for financial institutions, related work has been done and is continuing in other international committees. For example, a group of representatives of G-10 central banks prepared a report on "Recent Developments in International Interbank Relations" that was published in October 1992 by the Bank for International Settlements. That report, which followed two previous reports on interbank markets and the use of innovative financial instruments, focussed on the ways in which the use of derivative instruments has affected the relationships among financial institutions and international financial markets, with the objective of assessing the implications for systemic risk. The report has contributed significantly to the public discussion of these issues.

Another example is the international effort to reduce risk in settlement systems, as discussed in the response to Question 14).

QUESTION 7)

Individual derivative contracts, taken by themselves, include elements of risk. However, derivatives, when evaluated as part of an institution's entire portfolio, are often used to offset and reduce risk exposure of an institution. How do your regulatory actions, including capital and accounting standards, take into account the use of derivatives to reduce overall risk exposure of an institution? For purposes of regulation, how does your agency distinguish between derivatives used to hedge and reduce overall risk, such as many over-the-counter (OTC) contracts, and derivatives used for trading and other purposes, such as many exchange-traded contracts?

The risk reducing potential of derivative instruments is most relevant in the context of assessing market risk exposure and establishing related capital standards. Accordingly, both domestic and international capital proposals on market risks incorporate portfolio approaches to capital adequacy. The interagency proposal on interest rate risk would base capital charges on an estimate of the effect of a specified change in rates on the overall economic value of the institution after estimating the effect of a rate change on the value of all assets, liabilities and off-balance-sheet positions. Similarly, the international proposals on traded debt, traded equity and foreign exchange also involve market risk capital charges based on an assessment of the change in value of the full portfolio.

Generally accepted accounting principles (GAAP) require certain off-balance-sheet derivative instruments to be marked to market unless the instruments meet certain specified hedge accounting criteria[17]. If these criteria are met, the gains or losses associated with the instrument can be *deferred* and realized on a basis consistent with the income or expense of the item being hedged. This hedging accounting framework is derived from FASB Statement of Financial Accounting Standards (SFAS) No. 52, *Foreign Currency*

[17] Authoritative guidance of a general nature is provided by the FASB for foreign currency off-balance-sheet instruments and for futures contracts. However, FASB standards do not explicitly address many other instruments such as interest rate swaps and commodity-based instruments.

Translation and SFAS 80, *Accounting for Futures Contracts*. Each statement presents different hedging criteria and related guidance that differ from each other in certain respects. In particular, both standards require that the derivatives be identified as hedging specific assets, liabilities, or transactions. These GAAP standards must be followed for purposes of Y-9C reports and annual reports required under Section 112 of FDICIA.

The Call Report instructions have reporting requirements that differ from GAAP with regard to domestic futures and forward contracts and written options. Under this Call Report guidance, domestic futures and forward contracts must be marked to market, and hedge accounting is not permitted except when hedging mortgage banking operations. Hedge accounting for Call Report purposes is also not permitted for options. However, the Call Report follows GAAP for foreign currency off-balance-sheet derivative instruments (*e.g.*, foreign currency futures, forwards and interest rate swaps), thus permitting hedge accounting for these derivatives. Accordingly, the extent to which present regulatory accounting standards take into account the use of derivatives to reduce the overall risk exposure of an institution is limited to or, in some cases, is more restrictive than current GAAP conventions. However, it should be noted that even when hedge accounting is not permitted by GAAP or Call Report requirements, institutions can st se derivatives to adjust their risk exposures.

When evaluating market risks, the Federal Reserve does not consider OTC derivative instruments to be more or less appropriate for hedging or trading purposes than exchange-traded derivatives. Either type of instrument can be used as hedging or trading vehicles. However, in evaluating other risks such as credit risk, liquidity risk, operational risk and legal risk, the Federa serve's supervisory approach recognizes that banks assume a larger burden of risk ma ment in dealing in OTC derivatives markets than in

exchange-traded contracts. For example, examiners give careful review to the credit risk assessment and management process used for OTC derivatives, including ensuring that there is sufficient rigor in the credit analysis of prospective and existing counterparties. In addition, examiners assess whether sound approaches to credit risk reduction are utilized, such as for the collateralization of transactions and the use of legally enforceable netting agreements. Analyzing credit risk in exchange-traded contracts presents different issues because the exchange's clearing organization typically acts as the counterparty. To back up its guarantee of contract performance, the clearing organization generally protects itself through margining requirements based on daily marking-to-market of contract values, capitalization requirements for clearing members and loss-sharing rules.

The supervisory approach for other risks also takes into account differences between OTC and exchange-traded contracts. While exchange-traded contracts are standardized with regard to maturity, contract size and delivery terms, OTC contracts are custom tailored to the client's needs and often specify commodities or instruments and maturities that are not offered on any exchange. Therefore, the market risks associated with the particular terms of the contract must be managed carefully. It is also important that firms incorporate into their overall liquidity analysis the differences between the liquidity of contracts in OTC markets and those of more standardized contracts on futures exchanges, where liquidity is generally higher. Similarly, banks active in derivatives face qualitatively different operational and settlement risks in OTC than in exchange-traded markets.

QUESTION 8) a)

Recently published reports on derivatives activities, such as the July 1993 Group of Thirty report entitled *Derivatives: Practices and Principles* and the May 1993 Institute of International Finance, Inc. (IIF) report entitled *An Integrated Regulatory Approach to Derivatives Activities* stress the importance of internal controls over regulation in many areas. However, the Group of Thirty report has been criticized by some for relying too heavily on industry self-regulation.

a) **Regarding banks, the IIF report states, for example, that banks themselves should develop trading and credit policies that set their own risk limits. Do you think that such maximum risk limits should be set by institutions or by regulators?**

The basic tenet underlying the regulatory approach taken by supervisory authorities in the United States and abroad is that the development of operating policies and business strategies is a fundamental responsibility of a bank's directors and senior management. In the context of trading activities, in which strategies are integrally linked to the size and nature of the institution's risk taking, it is essential that the bank's directors and management 1) establish policies with respect to the setting of limits, and 2) enforce maximum limits of exposure that are acceptable to them.

The evaluation of the risk management process is an important supervisory focus. Supervisory authorities should seek to ensure that the bank's capital, expertise, and operating procedures are commensurate with the risks taken. The supervisory evaluation involves subjective judgments as well as quantitative measures. In making that assessment supervisors should consider a host of factors unique to the individual institution--factors such as the bank's capital adequacy, the nature of its trading activities, the expertise of its management and professional staff, and the capabilities of its management and information systems.

Importantly, the market does discipline its participants, as counterparties reduce

exposures to institutions regarded as taking excessive risks. This feedback mechanism encourages institutions to operate prudently and to develop information and operating systems that enable them to innovate and to price and conduct their activities efficiently. It also encourages market participants to enhance their understanding and management of risk more effectively than would regulatory requirements, which might be viewed as providing a "safe harbor."

Given the rapid pace of change in derivatives markets, specific regulations regarding limits would quickly become outdated and, perhaps worse, would also tend to stifle or discourage market innovations. Such innovations add greatly to the competitiveness and profitability of U.S. banking organizations. In short, although supervisory agencies as well as internal and external auditors all have important roles in evaluating a bank's practices and risk taking, the establishment of position limits is a business judgment and is, in the first instance, properly a province of its management and directors. Only when the risks are perceived to be unacceptably high should supervisory authorities require lower limits.

QUESTION 8) b)

In general, to what extent, and in what areas, do you think regulators should rely on internal controls versus regulatory requirements?

The complexity and volume of derivatives activities require that a bank have effective operating procedures and internal controls. Accordingly, the assessment of these procedures and controls represents an important element of an examination of derivatives and trading activities. Internal controls are important not only for operations dealing with the actual conduct and verification of a transaction, but also with matters "incidental" to the transaction, such as the effect of the transaction on the overall liquidity of the institution and the assessment of inherent legal and other risks that are not easily quantified.

While it is possible to enunciate general principles of risk management and internal controls, the difficult task is to apply these principles to large trading portfolios and complex products. Beyond specific limits and controls, the risk management process depends on the structure and integrity of the management information system, the quality of management, and the adherence of individuals to established internal procedures. These factors are best evaluated on-site by experienced and competent examiners, rather than through the promulgation of regulations that, in addition to being burdensome and inappropriate for many institutions, would not necessarily reduce risks. Through the examination process operating weaknesses, when identified, can be addressed in the context of the specific institution.

One area where the Federal Reserve believes that regulatory standards are appropriate involves the issue of capital adequacy. However, here again, the complexity of measuring market risk, combined with the generally satisfactory experience the commercial banking system has had in managing this risk in the past, raises important questions about the

costs and benefits of dictating specific standards. Consequently, when developing the structure of the recently issued interest rate risk proposal the banking agencies sought to minimize reporting burden, to focus on institutions taking exceptionally high levels of risk, and to permit, and in some cases require, the use of internal models in measuring exposures. This approach tries to balance the merits of providing specific minimum prudential standards with the difficulties and costs associated with developing and administering them.

QUESTION 8) c)

Do you feel that any of the "Recommendations for Dealers and End-Users" contained in the Group of Thirty report (Recommendations 1-20) should be formally mandated by regulation? Please comment on the different issues addressed in the recommendations with specificity.

Recommendations 1 through 20 in the Group of 30 study on derivatives should contribute importantly to a better understanding of sound risk management and accounting practices and, to the extent they are adopted by banks, should help to strengthen the management and operating practices of individual institutions and the financial system as a whole. Representing the collective views of key industry experts and market participants, these recommendations should receive substantial attention throughout the banking system and should be carefully considered by the bank regulatory agencies to bolster their relevant policy statements and examination procedures. However, the appropriate focus of supervisory standards derived from public policy fundamentals is not identical to that of the private sector practitioner reflected in the Group of Thirty report.

At this time, the Federal Reserve believes that many of the Group's recommendations dealing with the management of derivatives activities by dealers and end-users are useful recommendations and will consider these recommendations when reviewing its own supervisory policies and procedures. Whether some of these recommendations should be reflected in some formal manner is one of many issues being considered.

The Group of Thirty's recommendations represent one current view as to what constitutes good practice. As markets continue to develop and as further experience is gained by industry participants, it is likely that these recommendations will be further refined. It is important, then, that the regulatory framework not inadvertently inhibit the development of

further refinements or practices that may be developed in response to changes in technology, products or markets. Specific regulations on risk management, for example, might blunt initiatives by participants to innovate existing practices or create unintended risk as markets change and regulations become obsolete.

In addition, some recommendations may not apply fully to all institutions and if embodied in regulations could produce unintended results. For example, although the Federal Reserve strongly supports the increased use of master agreements, which is encouraged in recommendation No. 13, such agreements are not always best. Their value relative to specific counterparties should be determined on an individual basis, taking into account the enforceability of cross-product netting and other legal issues in the relevant jurisdictions. Although recent U.S. legislation helped substantially to remove uncertainties surrounding the treatment of netting agreements under U.S. law, considerable legal uncertainties remain for arrangements under foreign laws or with foreign counterparties, even if their offices are in the United States.

In general, existing laws and regulations already provide the Federal Reserve with sufficient authority to encourage banking organizations to adopt the Group's recommendations and to enforce the safe and sound operation of banks. Accordingly, the Federal Reserve believes that, in general, the usefulness of incorporating these recommendations into formal regulations is small. For example, many recommendations are couched in necessarily subjective terms:

No. 9: *End-users should adopt procedures relevant to dealers "as appropriate to the nature, size, and complexity" of their activities.*

No. 15: *Participants "should work together" to develop standards promoting the enforceability of transactions.*

No. 16: Professionals should have "appropriate experience, skill levels, and ... specialization"

No. 17: Systems should be "adequate" and transactions conducted in an "orderly and efficient manner."

Although these and other recommendations reflect excellent advice, they are either already more broadly covered under existing or proposed regulations or do not lend themselves readily to meaningful regulations. Moreover, where provisions are more objective, as in Number 18, which urges managements to designate individuals that have authority to commit their institutions to transactions, the report itself (also appropriately) emphasizes that such actions could be undermined by other factors and are "no substitute for appropriate internal controls."

Indeed, the importance of sound internal controls is paramount in conducting trading and derivatives activities in a prudent manner. Proposed safety and soundness regulations under section 132 of FDICIA cover internal controls and internal audit systems and should provide adequate standards for judging the adequacy of internal control systems relating to derivatives during the examination process. Importantly, these safety and soundness standards do not specify each operational and managerial procedure an institution must have in place but, rather, would establish the ends that proper operations and management shall achieve while leaving the means to each institution. Such an approach would avoid regulations that become quickly outmoded or that slow the rate of change and innovation necessary to control risk in evolving markets.

In the area of accounting and disclosure standards, the banking agencies, the accounting profession, and the SEC are able to use their general regulatory authority to accomplish much of the intended results and should continue to urge new standards that are

necessary as new products emerge. The Federal Reserve generally believes that the use of such existing authority represents a more flexible and timely way of addressing accounting and disclosure requirements in the complex and rapidly developing market for derivatives than would the adoption of additional regulations. For example, the banking agencies can require banking organizations to submit information in publicly available regulatory financial reports through the report's instructions rather than regulatory mandates. While every effort is made to maintain consistency with generally accepted accounting standards, there are occasions where prudential supervisory considerations demand more conservative treatment, and our reporting instructions so dictate. As pointed out in the response to question 1)b), the agencies are investigating areas for enhanced disclosure of derivative information.

With regard to reporting risk measures, Recommendation No. 5 states that market risk is best measured using "value at risk," defined as "the expected loss from an adverse market movement with a specified probability over a particular period of time." The Federal Reserve fully recognizes the importance of this concept and its relevance for supervising and controlling market risks. We would note that this measure is already embodied in regulations proposed by the banking agencies involving capital standards for interest rate risk. Moreover, evaluation of a bank's estimates of earnings at risk is an important element in an examiner's evaluation of trading activities.

QUESTION 9)

Please comment on the four "Recommendations for Legislators, Regulators, and Supervisors" contained in the July 1993 Group of Thirty report (Recommendations 21-24) as they are relevant to your agency. Please comment on each recommendation separately.

Recommendation 21 - Regulators and supervisors should recognize the benefits of netting arrangements where and to the full extent they are enforceable, and encourage their use by reflecting these arrangements in capital adequacy standards. Specifically, they should promptly implement the recognition of the effectiveness of bilateral close-out netting in bank capital regulations.

The Group of Thirty recommendation is consistent with the April 1993 recommendation of the Basle Committee on Banking Supervision. In a consultative proposal entitled "The Prudential Supervision of Netting, Market Risk, and Interest Rate Risk," the Basle Committee recommended that bank supervisors recognize bilateral close-out netting, in addition to netting by novation, for the purpose of calculating risk-based capital. The Basle Committee recommendation would require a bank to satisfy its supervisor that (1) its netting contract provides for netting of unrealized gains and losses in the event of the counterparty's default, (2) it has obtained written and reasoned legal opinions that such netting would be upheld in relevant jurisdictions, and (3) it has procedures in place to ensure that its netting arrangements are kept under review in light of changes in relevant laws.

The Board is currently developing proposals to amend its risk-based capital guidelines to conform to the Basle Committee recommendation. Such a proposed amendment would also be consistent with the Group of Thirty recommendation. The Board is working jointly with the other bank regulatory agencies in this effort to ensure consistent capital guidelines across the banking industry.

Recommendation 22 - Legislators, regulators, and supervisors, including central banks, should work in concert with dealers and end-users to identify and remove any remaining legal and regulatory uncertainties with respect to:

- *The form of documentation required to create legally enforceable agreements (statute of frauds).*
- *The capacity of parties, such as government entities, insurance companies, pension funds, and building societies, to enter into transactions (ultra vires).*
- *The enforceability of bilateral close-out netting and collateral arrangements in bankruptcy.*
- *The enforceability of multi-branch netting arrangements in bankruptcy.*
- *The legality/enforceability of derivatives transactions.*

The Board and other federal regulatory agencies have sought to identify issues that raise concerns regarding systemic risk and the stability of regulated institutions and the financial markets, and have proposed or supported legislative or regulatory measures needed to address such issues. Issues relevant to the derivatives markets that have been addressed by the Board and other federal agencies have included those relating to the enforceability of netting contracts and to the legality of OTC derivatives under the Commodity Exchange Act. The Board expects to continue to examine issues concerning derivative instruments and, where appropriate, to propose legislative or regulatory measures to address systemic risk and related concerns.

A number of other legal issues, however, such as the powers of municipalities and insurance companies to engage in derivatives transactions, are state law matters in which the imposition of a federal standard may not be justified. Such issues should be addressed by affected dealers and end-users at the appropriate level of government, with participants restricting their activities appropriately until such uncertainty is resolved.

Recommendation 23 - Legislators and tax authorities are encouraged to review and, where appropriate, amend tax laws and regulations that disadvantage the use of derivatives in risk management strategies. Tax impediments include the inconsistent or uncertain tax treatment of gains or losses on the derivatives, in comparison with the gains and losses that arise from the risks being managed.

Under the tax code, capital gains or losses arise from the sale or exchange of property which is a capital asset. In 1988 the Supreme Court in Arkansas Best advanced a literalist interpretation of the definition of capital asset, thereby narrowing the exceptions to that definition so that many transactions in derivatives would be viewed as giving rise to capital gains or losses rather than ordinary income or losses. This decision created significant concern and uncertainty in the financial markets over the tax treatment of hedging transactions. Prior to that case, taxpayers had assumed, relying in part on an earlier Supreme Court case, Corn Products, that financial instruments used to hedge business risks would receive ordinary tax treatment if they had been purchased for a business purpose, while Arkansas Best seemed to suggest that many hedging transactions would give rise to capital losses that could not be offset against ordinary income. In other words, a taxpayer could be liable for taxes on a transaction that generates no net income.

The recent Tax Court decision in FNMA v. Commissioner has provided some comfort to the financial markets by interpreting Arkansas Best to permit the statutory exceptions to the definition of capital asset to be construed liberally. The Tax Court further concluded that even property that does not fall within any of the statutory exceptions should receive ordinary tax treatment if it is "integrally related" to the underlying property which is excluded. The decision in FNMA has not resolved all of the uncertainty, however, and legislative or administrative action may be appropriate. Absent such action, for instruments or transactions about which the tax law is unclear, taxpayers are in the position of taking a

gamble as to the ultimate tax treatment. Further, where ordinary income treatment is not available, the benefits of hedging as a risk-reducing tool are decreased.

Recommendation 24 - Accounting standards-setting bodies in each country should, as a matter of priority, provide comprehensive guidance on accounting and reporting of transactions in financial instruments, including derivatives, and should work towards international harmonization of standards on this subject. Also, the International Accounting Standards Committee should finalize its accounting standard on Financial Instruments.

The Board agrees that reaching an international accord on accounting standards for derivative instruments is desirable. However, we believe that the International Accounting Standards Committee (IASC) should work closely with the bank supervisory agencies of those nations with significant derivatives markets in setting uniform accounting rules to ensure that supervisory concerns about derivatives are fully considered by the IASC and adequately addressed in any final IASC standards.

QUESTION 10)

If the July 1993 Group of Thirty "Recommendations for Dealers and End Users" (Recommendations 1-20) are not implemented by regulation, are there adequate mechanisms in place to ensure that such recommendations will be self-implemented? Concern has arisen regarding whether or not one can depend solely on the forces of managerial incentives to motivate firms to incur the implementation costs of the recommendations. Does your agency believe that mechanisms, such as periodic surveys of industry practice, a timetable for implementation, or a monitor of such actions are warranted?

The Federal Reserve believes it would be desirable for major market participants, both dealers and end-users, to adopt practices that are generally consistent with most of the Group of Thirty recommendations. The importance of the Group's report is that it represents a consensus on good practices that can be used as a foundation for standards against which major financial firms and many end-users will be measured by their boards of directors, customers, rating agencies, and peers.

Toward that end, the Federal Reserve would welcome further private sector initiatives designed to facilitate implementation of many of the recommendations. In this connection, it is noteworthy that the Group of Thirty has in the past been effective in developing mechanisms to monitor industry practices and implement its previous recommendations in other areas. Some of its most effective efforts have dealt with the securities clearance process. We would expect and encourage further follow-up efforts by the Group in this most recent undertaking. For their part, the banking industry, financial analyst and accounting professions can also do much to ensure the adoption of key recommendations. Indeed, several accounting initiatives dealing with market risk and derivatives activities have recently been adopted or are being actively debated by these groups, as suggested in the response to Question 8.

As this question suggests, however, such internal and industry pressures may not by themselves adequately ensure that sound risk management and disclosure practices will be adopted by all major firms or by other firms whose specific activities warrant implementation of some or all of the recommendations. Consequently, in fulfilling our oversight responsibilities, the Federal Reserve and the other regulatory agencies will thoroughly consider these recommendations and some will be reflected in supervisory policies and examination procedures as appropriate. This supervisory process will further facilitate adoption of improved practices throughout the banking system.

However, the practices recommended in the report already coincide to some extent with existing managerial and supervisory concepts of sound risk management practice. As indicated by the Group's survey, a number of major market participants already adhere to many or most of the recommended standards, and key elements of the recommendations are embodied in current supervisory procedures. Indeed, supervisory standards, procedures, and proposed requirements dealing with derivatives activities in many cases go beyond those recommended in the Group's report, as illustrated by the collection of supplementary materials provided as attachments to these questions. Ongoing international efforts conducted under the auspices of the Bank for International Settlements can also be expected to provide financial institutions throughout the world with added incentives to consider and adopt key recommendations of the report such as the adoption of bi-lateral close-out nettings and the use of value at risk measures.

QUESTION 11)

Please comment on whether institutions should be required to establish separately-capitalized subsidiaries to conduct derivatives activities.

The primary reason for requiring banks to conduct certain activities in separately capitalized subsidiaries is to shield the bank from the risk of loss that might result directly from activities that pose more than normal banking risk. Experience to date does not suggest that derivatives activities expose banks to risks of sufficient magnitude that they should be required to establish separately-capitalized subsidiaries to conduct these activities. In fact, derivatives activities have been a consistent source of profitability for the banking industry. For example, income from foreign exchange activities, whether performed for customers or a bank's own account, has historically been a stable source of profits for some banks. Derivative products are closely related to the traditional business of banking and provide a means for managing currency, and interest rate risks -- risks that regularly factor into the international banking business. As a result, banks are familiar with the management of risk in the markets underlying derivative instruments, such as currency and interest rate swaps, options, and forwards. Moreover, derivatives can be used to manage an institution's exposure to currency and interest rate risk that result from its other activities.

Requiring separate subsidiaries for the conduct of derivatives activities might hamper the global competitiveness of U.S. banking organizations. One of the principal objectives of the Basle Accord was to create a more "level playing field" in international financial competition. Requiring U.S. banking organizations to conduct derivatives activities only through separately capitalized subsidiaries, could disadvantage U.S. banks in the international derivatives market and undermine their long term profitability.

QUESTION 12)

Do you believe the netting provisions contained in the Bankruptcy Code, FIRREA, and FDICIA should be conformed to a single standard? Do the netting provisions in these statutes adequately cover all situations? If not, what situations do and don't they cover?

The U.S. Bankruptcy Code, FIRREA, and FDICIA all contain provisions regarding the netting of obligations between financial market participants in the event that one of the participants fails. It may be desirable to have a single standard as to what types of netting contracts are covered. Uniformity would help provide certainty to financial market participants regarding the extent of netting coverage.

The FDICIA provisions are the most comprehensive, validating both bilateral and multilateral netting in the event of a default. Neither FIRREA nor the Bankruptcy Code explicitly covers both bilateral and multilateral netting. The FDICIA provisions are designed to promote efficiency and reduce risk in the financial markets. They apply to financial institutions and to clearing organizations whose members are financial institutions. Financial institutions are defined as depository institutions, securities brokers or dealers, futures commission merchants, or other institutions as determined by the Board. The Board has requested comment on a proposed regulation to expand the definition of financial institution to include financial market participants that meet certain market-activity tests. (58 FR 29149, May 29, 1993). The FDICIA netting provisions apply broadly to any netting contract governed by U.S. federal or state law that provides for netting present or future payment obligations (including liquidation or close-out values) among the parties to the contract. The FDICIA netting provisions apply to all valid netting contracts between covered parties, notwithstanding any other provision of law.

FIRREA amended the Federal Deposit Insurance Act to allow parties to

liquidate or net obligations under a qualified financial contract when the counterparty is a depository institution for which the FDIC has been appointed receiver. Unlike the FDICIA provisions, FIRREA allows netting by any party to a contract with a failed depository institution, not just by financial institutions. However, the FIRREA definition of qualified financial contract is narrower than the FDICIA netting contract definition. A qualified financial contract means any securities contract, commodity contract, forward contract, repurchase agreement, swap agreement, or similar agreement as determined by the FDIC. It is not clear whether the FIRREA provisions would apply to federal funds transactions or spot contracts, as would the FDICIA provisions.

The Bankruptcy Code allows exceptions to its automatic stay provisions[18] for certain types of financial contracts. In the event of the bankruptcy of one party, the Code allows counterparties to exercise their contractual rights to liquidate securities contracts, commodities contracts, forward contracts, repurchase agreements, and swap agreements. The Bankruptcy Code applies to virtually all failed entities, with the primary exceptions of depository institutions and insurance companies. Like FIRREA, it is unclear whether the Bankruptcy Code would apply to federal funds transactions or spot contracts.

[18] The Bankruptcy Code generally bars all efforts to collect pre-petition debts from a debtor or from the property of a bankruptcy estate. This automatic stay arises immediately upon the filing of a voluntary petition; a court order is not necessary.

QUESTION 13)

Recommendations contained in the July 1993 Group of Thirty Report (Recommendation 20) and elsewhere state that until harmonized accounting and disclosure standards are set, certain disclosures should be made by dealers and end-users. Although a disclosure regarding credit risk is recommended, a similar disclosure for market risk is not mentioned. Should a summary measure of market-risk exposure be disclosed? If so, what form should such a measure take?

As pointed out in the Working Paper of the Accounting and Reporting Subcommittee of the Group of Thirty, a number of practical considerations present significant challenges in disclosing exposures to market risk. Most of these difficulties arise out of concern regarding the competitive sensitivity and the potential reporting burden that such disclosure might entail. Nevertheless, these difficulties do not appear insurmountable and greater efforts need to be directed toward this important aspect of financial disclosure. In particular, methods for reporting meaningful assessments of "value at risk" need to be fully explored. To this end, efforts are being taken by regulatory agencies both domestically and abroad to explore these issues for supervisory purposes by advancing for public comment various capital assessment approaches for market risks that involve scenario analysis of an institution's value at risk. As pointed out in the responses to previous questions, the domestic proposal on interest rate risk and international proposals on traded debt and foreign exchange involve such estimations. However, in neither case have final determinations been made.

Even when regulatory measures are determined, institutions may have legitimate concerns about representing them as the appropriate risk measure because, while they may be adequate for supervisory purposes, they have shortcomings and reflect many assumptions and simplifications made in the interest of minimizing regulatory burden. In the context of the domestic proposal, these concerns should be eased somewhat, especially in the case of

large institutions, because the proposal would permit institutions to use their internal models to measure risk.[19]

The question of whether an institution should disclose any market risk measure derived from internal models is one the federal banking agencies have issued for public comment in connection with their proposal for interest rate risk. Pending industry comments, the Federal Reserve is undecided about the specific nature of such disclosures. Nevertheless, we would encourage institutions to disclose both qualitative and quantitative measures of market risk and believe that more institutions will increase their disclosures as a consensus builds regarding the nature of proper and adequate disclosures. Generally, such disclosures should address exposures to a number of both rising and declining rate environments in order to convey the asymmetries in the sensitivity of their on- and off-balance-sheet positions. Disclosures should also discuss the nature of the stress tests used to measure exposure. The agencies are also considering disclosures pursuant to authority granted by section 112 of FDICIA.

Of course, the market itself encourages enhanced disclosure. Market participants are reluctant to accept as counterparties those firms that do not provide meaningful and sufficient information regarding their creditworthiness.

[19] Internal models could be used provided that examiners had determined that the model adequately addressed the risks incurred by the institution and that the model effectively measured value at risk under a specific scenario.

QUESTION 14)

Please comment on the notion of establishing a clearinghouse offset mechanism for swaps transactions. How would a clearinghouse offset separately affect dealers and end-users? Would either benefit more than the other?

In financial markets, a clearinghouse is a mechanism that may be used for confirming transactions among counterparties, calculating settlement positions, managing cash and collateral associated with settlements, and providing risk management services. Many clearinghouses perform some sort of explicit or implicit multilateral netting of positions, provide guarantees of settlement, or both. Clearinghouses have the potential to reduce operational costs, counterparty credit risks, and liquidity risks in the markets they serve. By netting transactions, guaranteeing settlement and concentrating market settlement activity, however, clearinghouses may also give rise to systemic risks.

The Federal Reserve, together with other G-10 central banks, has encouraged efforts to strengthen multilateral netting, payment, and settlement systems, such as clearing-houses, so that these systems act to reduce and contain potential systemic problems rather than to transmit such problems to other markets and institutions. Along these lines, the central banks of the G-10 countries published a report in 1990 entitled "Report of the Committee on Interbank Netting Schemes of the Central Banks of the Group of Ten Countries" (Lamfalussy Report). That report identified a number of minimum standards for the structuring of multilateral cross-border and multi-currency netting systems. The report could serve as a useful starting point in evaluating the soundness of any specific industry proposal for a swaps clearinghouse.

The notion of a clearinghouse for swaps or other OTC derivative transactions occasionally has been mentioned by various market participants. To date, however, no firm

proposal for creating a swaps clearinghouse has been put forward. In theory, such a clearinghouse may produce a number of benefits for the market. First, market makers may be able to reduce their counterparty risk exposures for given transaction volumes, if clearinghouse arrangements provide for legally supportable netting or guarantees of settlement. Second, clearinghouses may provide for enhanced risk management, including both credit and liquidity risk management. Third, clearinghouse arrangements that provide for enhanced risk management may increase the ability of a larger number of organizations to participate in the market. All of these factors may well allow increased trading volumes for given levels of capital committed to the market and may therefore tend to increase market liquidity. (On the other hand, some may view such increases in liquidity, including greater trading on the same capital base, as allowing greater "leverage".) Fourth, a clearinghouse, through its rules and procedures, may tend to standardize industry practices and "back-office" systems, leading to further operational cost savings for the market. Fifth, a well-developed clearinghouse might provide useful self-regulatory functions, as well as acting as a source of market information for supervisors and regulators. Finally, a clearinghouse might facilitate the prompt closing of a failed participant's positions, thereby tending to limit potential losses to creditors and reduce the likelihood of market-wide disturbances. Along with these potential benefits to the market, there are undoubtedly technical and business issues that would need to be overcome in setting up clearinghouse arrangements.

If, instead of achieving reductions in actual credit and liquidity exposures which participants would experience in the event of a counterparty default, multilateral netting through a clearinghouse merely obscures the level of exposures, then such an arrangement has the potential to contribute to an increase in systemic risk. Moreover, even when actual

exposures are reduced, multilateral netting systems can shift and concentrate risks in ways that could increase systemic risk by increasing the likelihood that one institution's failure will undermine the condition of others. The degree of systemic risk in multilateral arrangements depends on the strength of the incentives for the netting provider and the participants to manage their exposures and on the strength of the risk management system employed.

As a general matter, dealers, end-users, and financial markets generally are likely to benefit from the clearing arrangements provided by a properly designed clearing-house. The distribution of benefits would depend on the details of a particular proposal. Given the potential risk exposures and the likely complexity of the risk management aspects of a swaps clearinghouse, however, any specific proposal put forward by market participants would need to be carefully reviewed and analyzed by the appropriate supervisors and regulators. The Federal Reserve, as the central bank, would be especially concerned about the systemic risk implications of clearinghouse arrangements and the potential affect of any arrangement on the stability of payment systems and the integrity of financial markets.

QUESTION 15)

Are there adequate mechanisms currently in place to protect unsophisticated end-users of derivative products? If not, what are your recommendations?

With regard to exchange traded derivatives instruments, the Commodities Futures Trading Act and CFTC regulatory controls currently in place appear to be adequate for protecting unsophisticated end users.

For OTC derivatives markets there are several mechanisms that currently limit the participation of certain end users. As an initial matter, the exemption from the Commodity Exchange Act provided by the CFTC for swaps and related OTC derivatives covers only transactions entered into between "eligible swap participants," which generally are limited to commercial and financial entities and other participants that are considered to have relatively high levels of financial expertise. More specifically, "eligible swap participants" are defined by the CFTC to include: depository institutions, trust companies, insurance companies, investment companies, commodity pools, corporations and other business organizations that have total assets exceeding $10,000,000 or that meet certain other criteria, employee benefit plans with assets of at least $5,000,000 or the investments of which are managed by certain regulated entities, governmental entities, broker-dealers, futures commission merchants and floor brokers and traders, or natural persons with total assets exceeding $10,000,000.[20]

A more fundamental limitation on participation in the OTC derivatives markets to financially sophisticated end-users is that each counterparty to a swap or similar transaction is exposed to the credit risk of its counterparty for the entire term of the swap. Unlike trading markets, such as the securities markets, where buyers and sellers have no continuing

[20] 12 CFR 35.1(b)(2) (as added by 58 FR 5587 (January 22, 1993).

exposure after settlement of a transaction, a participant in a swap or similar transaction has a continuing exposure to the non-performance of its counterparty for the duration of the contract.[20] This exposure provides dealers and other swap participants with a strong incentive to satisfy themselves that their counterparties are sufficiently able to handle the risks associated with the derivatives transactions in which they are engaged, particularly where lines are established to cover multiple transactions.

Beyond these barriers to either entry or active participation in the OTC derivatives markets, past experience does not appear to justify additional protective measures for end-users. Further, suitability rules similar to those applied to the securities markets may be difficult to develop. End-users of derivative products cover an extremely broad spectrum, and the level of sophistication of an end-user with respect to derivative instruments is not necessarily related to the size, net worth, or nature of the organization. Some end users engage in a very limited number of transactions tailored to cover particular exposures or in connection with specific transactions. For example, an interest rate swap may be used to lower the funding risks of an issuer of floating-rate bonds. Such a transaction could require relatively limited knowledge of derivatives on the part of the end user, while lowering its exposure to the risk of rising interest rates. Other end users with greater experience and more complex sources of exposure may use OTC derivatives products much more actively in their overall risk management. Given the broad range of entities that can legitimately benefit from the use of derivative instruments, it would be difficult to develop standards to protect

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[20] While both parties to a swap have exposure to one another, the risks associated with option contracts are asymmetrical. The buyer of an option is exposed to the risk of non-performance by its counterparty until expiration or exercise of the option, but the seller of the option has no exposure to the buyer once the option premium has been paid.

unsophisticated parties that would not also inhibit their efforts to reduce risks.[21]

While further protective measures do not appear to be necessary in the current market, as the OTC markets expand it may be appropriate to consider other measures to assure that end-users are aware of the risks of the transactions they enter into. Perhaps the most effective vehicle for protecting unsophisticated end-users is education. It is our understanding that there are a number of industry sponsored educational efforts currently underway or in the planning stages. If these educational efforts are successful, end-users should have a better understanding of the appropriate use of derivatives in risk management and will be more aware of the risks they assume when entering into a derivatives contract.

[21] This difficulty is reflected in the experience of the CFTC with users of exchange-traded derivatives. The CFTC withdrew its proposal for a "suitability" standard for application to users of futures contracts, indicating that it had not been able to develop "meaningful standards of universal application" at that time. 43 FR 31886, 31888 (July 24, 1978). The National Futures Association also attempted to formulate a "suitability" standard, but ultimately adopted a "know-your-customer" rule in combination with disclosure requirements. See memorandum of March 14, 1986, to the CFTC concerning Proposed NFA Compliance Rule 2-30. The NFA "know-your-customer" rule applies only to customers that are individuals, and requires relatively limited information compared with that generally required by a counterparty in a derivative transaction.

QUESTION 16)

What kind of stress test simulations do you recommend to account for the different types of risk which arise as a result of financial derivative activity?

Stress test simulations are used by many financial institutions and by virtually all large and sophisticated banks to identify and assess market risks. A potentially wide range of factors can cause gains or losses in derivatives portfolios and frustrate controlling portfolio risks. These factors include low-probability events in all the major types of risk that the firm incurs, such as market, credit, liquidity and operational risks.

To consider the effect of this broad range of events, firms should conduct a variety of stress test simulations and should also vary the scenarios examined as the nature of risks and the firm's exposure to them evolve. Simulations should not be limited to results of computer models. They should also, consider and develop contingency plans that involve operational procedures, such as the response to power failures, to settlement or liquidity problems in various markets or with particular counterparties, to programming errors that mis-price financial products, or to the loss of key personnel. Each "worst-case" scenario provides further insights into how the firm's derivatives and other portfolios react to stress and helps to identify appropriate courses of action.

Because virtually all financial market participants are exposed to market, credit, and liquidity risks to some extent, it is reasonable that all firms include some standard scenarios in their simulation tests. For market risk, standard scenarios include assessing the effect of unusually large movements in interest rates or exchange rates to which many institutions have exposure. Large moves might be defined as several standard deviations from current prices, or as the largest price move observed over a recent historical period. Stress

simulations should evaluate the effect of both rising and declining price movements so that management can observe the asymmetric reactions of options and other derivative instruments to price changes.

Simulations involving credit risk might also evaluate the effect of problems that are concentrated in sectors or regions in which the firm has significant activity and exposures. To evaluate liquidity risk, scenarios traditionally consider declines in the firm's own credit standing as well as major market disruptions, such as those caused by the sharp stock market decline in October, 1987.

During all simulations, insights are gained by altering assumptions, for example those involving price volatility and price correlations. Many models include assumptions for these and other factors that are based on historical experience, but that would not accurately estimate future outcomes. Recent experience in domestic and foreign markets, such as the rapid prepayment speeds for domestic residential mortgages and the increased volatilities of European foreign exchange rates, illustrate the character of historically unprecedented developments that institutions might face.

When evaluating any scenario, the firm should consider that "worst-case" events in one area may have ramifications for others. As an example, an unusually large decline in commodity prices could expose an institution to losses on open positions in that commodity and create trading losses. However, if sustained, the market price decline could also threaten the solvency of firms that produce the commodity and lead to increased loan losses if the institution has other credit exposures to those producers. Similarly, the expected or actual failure of a firm's counterparties or borrowers, if sufficiently severe, could erode market confidence in the firm itself and reduce its own liquidity.

These latter scenarios, which consider the interaction of different events on the value of an institution's portfolio, illustrate the importance of placing primary responsibility for developing stress test simulations with a firm's senior management and for ensuring adequate review by the board of directors. They, rather than the regulatory agencies, are best positioned to have the necessary specific and comprehensive knowledge of the firm's business and risk profiles and to produce the best estimates of reasonable worst-case possibilities. For their part, the institution's supervisors and internal and external auditors should provide independent assessments of the simulations to ensure they are sufficiently rigorous and complete and that they meet appropriate prudential standards.

QUESTION 17

Please comment on your agency's view of the proper use and level of collateral in derivative transactions.

The use of collateral in derivative transactions must be incorporated in the overall context of the institution's credit process. Prior to entering into a derivatives transaction, a bank should conduct a detailed credit risk analysis, similar to that conducted prior to a traditional loan commitment, that includes a careful evaluation of the counterparty's overall ability and willingness to perform on a contract as agreed. Once the creditworthiness of the customer is determined, the bank should establish limits for the customer across the various on and off-balance-sheet products the bank is willing to offer to the customer. These limits are designed to keep the overall credit risk to the customer within the bounds of credit exposure the bank has set.

In establishing credit exposure limits with a counterparty, a bank may also consider the value of any collateral or other enhancements that reduce credit risk. However, obtaining collateral does not exempt the bank from following basic credit analysis procedures outlined above. The use of collateral as part of a bank's credit risk reduction efforts is viewed as an acceptable practice provided certain minimum safeguards are met. The bank must actually have control of the collateral and it should be readily marketable. In determining the amount of collateral to require, the bank should consider both the actual mark to market exposure to the customer and any add-on for possible price movements that might occur before the bank can liquidate its exposure. The bank should also have the ability to terminate the contract if collateral becomes impaired and have the ability to substitute or liquidate the collateral in a timely manner.

Recently, some market participants have negotiated contracts that require the posting of collateral if certain "triggering events" occur. In some cases, the triggering event is based on the size of exposure using market values; in other cases it may be based on the creditworthiness of the counterparty. For example, a AAA rated company may be required under a derivatives contract to deliver collateral should its credit rating decline to a BBB grade. Excessive reliance on such collateral triggers, particularly those based on creditworthiness, can be imprudent. In particular, such collateral arrangements could place substantial liquidity pressures on a counterparty just when its creditworthiness is weakening and its access to liquidity is more limited.

QUESTION 18)

When assessing a counterparty for credit risk, how much relative emphasis should be placed upon factors such as capital, disclosure and credit rating? For example, should a credit rating be a proxy for capital?

In assessing the creditworthiness of a counterparty, an institution should conduct its own independent credit analysis prior to committing to a derivatives contract. That analysis should follow the same prudent steps used to analyze on-balance sheet credit exposures. The analysis should include an assessment of the overall financial condition, performance and resources of the counterparty (including capital), and the institution's future earnings prospects given its past performance and the industry and markets in which it operates. The analysis should also consider the nature and value of any underlying guarantees or collateral and the counterparty's willingness and overall ability to perform as agreed. It should reflect the relevant information about the potential counterparty that is available to the firm and would most likely include evaluations of credit rating agencies if such ratings were available.

Institutions should not place undue reliance on any single source of information or analysis regarding a company, but should make their creditworthiness assessments after reviewing and analyzing the diversity of available materials. That review could produce different insights and conclusions than reached by others, either relative to the creditworthiness of the counterparty, in general, or to the merits of a specific transaction, in particular.

In short, while credit ratings themselves should reflect a firm's overall capital strength, an institution should not rely on such ratings in lieu of its own more current, complete and independent credit analysis. Indeed, since credit analysis has traditionally been

the primary business of banking organizations, it should not be an activity they readily delegate to others.

QUESTION 19)

Are executive decisions regarding derivatives on average, concentrated in too few individuals in each institution to catch problems in a timely manner? Should the decision-making process, where derivatives are involved, be decentralized to enhance internal controls?

The inherent complexity of many derivatives instruments is such that derivatives may only be fully understood by a limited number of people in any single institution. Therefore, banks must be careful to design control procedures that ensure that sufficient checks and balances are in place and that the risks presented by the concentration of technical knowledge are adequately managed.

Such procedures should rely heavily on the segregation of responsibilities that would deter or detect fraud and other operating problems that might otherwise arise because of the concentration of expertise. Functions for which the division of responsibilities is critical include valuation, monitoring of positions and limits, credit analysis, and the analysis and development of overall risk management policies. Concentrating these duties with one person or a small group may create situations where loss positions could be easily disguised or hidden, or where imprudent actions could be more easily taken.

It is essential that the personnel conducting risk management functions have the appropriate expertise and authority to act independently. Moreover, a well structured set of operational systems and internal controls is necessary.

Whether an institution concentrates decision making in a single office or decentralizes it across functional or geographic boundaries depends largely on its management culture, its information systems, its size and structure, and the capability of its workers. Regardless of that decision making structure, management and the Board of Directors are

responsible for ensuring that internal control systems provide reasonable assurance that errors and omissions are prevented or revealed before major problems develop.

QUESTION 20)

Do compensation policies currently in place adequately discourage undue risk-taking? For example, if employees benefit financially from risk-taking in a direct manner, how is such risk-taking controlled?

A strong link between compensation and performance is both useful and necessary in a trading environment. In order to attract, retain, and motivate highly skilled personnel to execute and oversee sophisticated and often very profitable trading functions, firms must provide compensation commensurate with their contribution to the firm's profitability. However, as implied by the question, such arrangements can provide incentives for individuals to take inappropriate risks unless compensation policies take into account not only the returns from trading but also the risks incurred in generating those returns. Consequently, large institutions have established independent market risk management functions to develop and enforce position limits and overall policies for controlling risk. Typically, these institutions also have strong internal audit functions as well as comprehensive external audits. Individuals in all of these risk management and risk review functions can maintain their independence only if they do not conduct individual transactions and do not benefit directly from positions taken by others. Indeed, at each stage of the supervisory or internal oversight process the organization's policies should be reviewed to determine that compensation for these individuals is progressively distanced from the profitability of specific transactions.

By establishing position limits and determining the institution's overall appetite for risk taking, directors and senior management set the boundaries for acceptable trading activities, regardless of whatever specific transactions an individual trader may want to conduct. These limits, in turn, must be adequately implemented and enforced through a system of internal controls and subject to change pursuant to an appropriate review process.

Reviewing these control procedures and the manner in which they are enforced should be an important element in any examination or audit of the trading activity. Although these limits and controls have not prevented U.S. banks from experiencing individual losses due to fraud or unauthorized trading, they have been sufficient to maintain overall profitability in the banking system's trading activity over the last decade and have prevented losses from trading financial derivatives from significantly affecting the financial viability of any bank.

Just as successful traders demand high compensation for their specialized skills and expertise, individuals that audit, control, and manage trading derivatives activities must also have extensive skills and must also be compensated adequately for their talents. Otherwise, an institution risks high turnover in the control activities as individuals gain critical experience and seek better paying jobs, such as those of traders or others more closely related to position-taking activities. Beyond financial compensation, individuals that limit or control the trading process must also be given adequate authority and independence within the institution so that they can effectively challenge the most highly compensated traders and prevent undue risk-taking.

QUESTION 21)

What is the level of systemic risk resulting from derivatives activities? Do you agree with those who assert that derivatives activities are concentrated in too few institutions?

Considerable thought has been given, especially among central banks, to the question of whether -- and in what ways -- derivatives activities significantly change the level of systemic risk in financial markets. The Federal Reserve believes that the greater awareness and understanding of risk and the enhanced methods of managing risks probably have reduced the likelihood of systemic problems, and will continue to do so over time as industry and supervisory practices advance.

While the various elements of risk associated with derivative activities are not unique, the complexity of some derivative instruments -- especially given the interrelationships among the various elements -- tends to make the problem of risk management more difficult. To assess the impact on their total portfolios of potential changes in market prices, financial institutions must monitor and value their positions in a wide range of markets, and must assess liquidity in each of those markets. The concentration of certain derivatives activities in a relatively small number of market makers affects the evaluation of potential liquidity. At the same time, assessment of credit risk is especially important because of the credit exposures that can arise from derivatives transactions, but the complexity of derivatives books and the evolving but still disparate nature of disclosure in various countries make the assessment of counterparties somewhat opaque and difficult.

On the other hand, the complexity of derivatives activities -- coupled with the urging of supervisors -- has induced financial institutions to upgrade significantly their risk management capabilities and to seek ways to reduce risk. For example, financial institutions, whose senior managers have become more sensitive to the risks they are incurring, have

devoted substantial resources to the development of more sophisticated risk management tools and have made increasing use of netting to reduce their credit exposures. These efforts, and others, have had favorable spill-over effects on institutions' abilities to manage their total portfolios, not just their derivatives activities. With respect to concentration in derivatives markets, the fact that market-making is feasible only for firms in a strong financial condition and with long experience in dealing with similar risks in foreign exchange markets (because only such firms have the resources needed to manage these risks properly and are the most attractive counterparties) is a positive element.

Partly, but not exclusively, as a result of derivatives activities, the linkages among financial markets and financial institutions -- especially cross-border linkages -- have become stronger. Disturbances can spread more quickly throughout the international financial system. As a consequence of these increased linkages, if a systemic problem were to arise, central banks, who would be called upon to help resolve the problem, need to be able to respond more quickly, need greater technical sophistication, and need to coordinate their responses effectively. The central bank community recognizes the new elements of the challenges raised by derivatives activities and has been working, in a wide range of fora, to prepare to meet them.

QUESTION 22)

Cash liquidity risk for a firm appears to be a greater concern the greater is a firm's involvement in derivatives activities, the greater is its reliance on short-term funding, the lower is its credit standing, and the more restricted is its access to the control bank discount or borrowing facilities. Therefore, in contrast to depository institutions who, among other things, have access to the discount window, securities firms may find cash management requirements, such as maintaining margin requirements, arising from large derivative portfolios to be more challenging. Compared to depository institutions, how does the less liquid nature of the securities business effect derivatives activities and the risks associated with such activities?

Securities firms have considerable experience in managing liquidity demands associated with margin and collateral requirements. The large investment banking organizations have for many years been clearing members of futures exchanges, whose clearing houses require daily (and, in some cases, intraday) payments of variation margin and daily adjustment of performance bond (collateral) requirements. Also, their securities holdings typically are financed on a collateralized basis through repurchase agreements or bank loans.

Nonetheless, securities firms may find themselves short of cash, especially if their creditworthiness deteriorates. For example, the Drexel Burnham Lambert Group faced mounting cash pressures prior to its demise, and the timing of the parent company's bankruptcy filing was dictated by its inability to roll over maturing commercial paper liabilities.

Every financial intermediary, whether organized as a bank, a securities firm, or otherwise, needs to carefully assess and plan to meet unusual liquidity pressures, including those that might accompany a deterioration of its creditworthiness (as reflected, for example, in downgrades of its credit ratings). In this context, the firm should realistically assess its ability to readily close out positions in OTC derivatives. Those assessments should then be incorporated in planning for the management of liquidity needs. Discussions with securities firms suggest that, since Drexel's problems, many firms have paid more careful attention to

potential liquidity needs. For example, the use of stress tests or simulations comparing funding requirements to funding sources now are more common. As the Group of Thirty has recommended, such tests should become standard practice.

Question 23)

Criticism of speculators in the derivatives markets, primarily in exchange-traded derivatives such as currency futures and options, has focused on the alleged ability of such speculators to manipulate markets. Concerns have also arisen as to the potential depository institution exposure as a result of speculators' activities. Please comment on these criticisms and whether or not such speculators should be subject to increased regulation or supervision.

The term "speculator" generally is used to refer to a participant in a market who is willing to take a view on the direction the market is heading, establishing an open position to profit from market movements in a particular direction, rather than seeking to offset an exposure in another market. Speculators are active in most financial markets. Indeed, the activity of such traders often is an important source of liquidity to other market participants, accommodating those who do not wish to allow positions to remain uncovered or who are using the markets for risk management or other hedging purposes.

Nonetheless, one of the principle motivations for regulation of exchange-traded derivatives is a concern that speculators might manipulate prices on the futures exchanges. Manipulations are most apt to occur in markets for derivative contracts that are relatively illiquid and have a relatively fixed supply of the asset underlying the contracts. For example, the grain contracts originally traded on futures exchanges were based on standardized agricultural commodities having a fixed supply within the short delivery time allotted. Because of the potential for manipulation of certain types of exchange-traded contracts, the Commodity Futures Trading Commission and the futures exchanges have developed an extensive regulatory framework to mitigate this potential.[22] Although this framework does not

[22] This regulatory framework includes: 1) review of contract design; 2) market surveillance by both exchanges and regulators; 3) large trader reports revealing contract holdings of one customer across clearing firms; 4) communication with large futures market participants in order

apply to OTC derivative markets in which depository institutions participate, such manipulation seems unlikely to occur. The vast majority of OTC derivatives are based on widely used financial indexes, such as LIBOR, and are settled in cash in either US dollars or heavily-traded foreign currencies. The funds and foreign exchange markets to which these transactions are linked are highly liquid and the supply of the underlying currencies or deposits are sufficiently large as to make manipulation of the indices on which OTC derivatives are based extremely difficult.

With respect to the effects of activities by speculators on depository institutions, it is always possible for large surges of speculative or other trading activity to effect market prices unexpectedly and thus to have an adverse effect on depository institutions that participate in those markets or have obligations tied to those markets. This is true even in the absence of market manipulation. As discussed in Question 1 above, however, one of the objectives of bank supervision and examination is to ensure that institutions have appropriate internal controls and limits on exposure to changes in interest or foreign exchange rates or other market movements. Such controls and limits are designed to ensure that any losses that result from sudden market movements are within an acceptable range for the particular trading activity.

It is also possible that a bank may have credit exposures to an entity that is engaging in speculative activity (either from derivatives contracts, loans or other sources) and that such a counterparty could encounter financial difficulties as a result of the speculative

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to determine their intentions to make or take delivery; 5) limits on speculative positions for all contract months, with lower limits in the delivery month to preclude the ability of speculators to control a large number of contracts during a period in which supply of the underlying good may be limited; 6) emergency powers to address situations in which manipulation is threatened or has taken place.

activity. Such risks are controlled through traditional credit analysis procedures, under which a bank would familiarize itself with the business and activities of the counterparty and set limits on credit exposure appropriately.

QUESTION 24)

What, if any, effect will the depositor preference provision of the Omnibus Budget Reconciliation Act of 1993 have on the derivatives market?

The depositor preference provision of the Omnibus Budget Reconciliation Act of 1993 subordinates the claims of counterparties to derivatives transactions to the claims of domestic depositors in the event of the failure of a depository institution insured by the Federal Deposit Insurance Corporation. In the event of such a failure, this preference is likely to reduce the recoveries of derivatives counterparties. This potential for reduced recoveries may make them more reluctant to engage in derivative transactions, particularly longer dated transactions, with insured U.S. depository institutions in general and troubled insured depository institutions in particular. In this respect, it would tend to place U.S. banks at a competitive disadvantage to foreign banks and possibly to other nonbank financial institutions. In addition, it may complicate the resolution of troubled institutions.

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August 9, 1993

Mr. Alan Greenspan
Chairman
Board of Governors
Federal Reserve System
20th Street and Constitution Avenue, N.W.
Washington, D.C. 20551

CLO: #G-132
CCS: #93-3586
RECVD: 8/09/93
Prell

Dear Mr. Greenspan:

As Ranking Member of the Committee on Banking, Finance and Urban Affairs, I have initiated the preparation of periodic studies to explore various issues of importance to the Committee and its members.

We are now in the process of preparing an informational study on financial derivatives. I anticipate that numerous issues involving derivatives and their impact on the global financial system will be before the Committee later this session of Congress. The preparation of an informational report at this time will assist Members in the Committee's deliberations on these very complex, and relatively unknown issues.

As you know, derivatives are becoming increasingly important financial tools. Their impact on the global markets is considerable, and several studies are currently being prepared to examine issues surrounding these instruments. I would appreciate any assistance that your agency can provide to the Minority staff with regard to this topic. Specifically, it would be most helpful if your staff could provide responses to the attached questions.

Thank you for your cooperation in this matter, and I look forward to your timely response. If you have any questions, please have your staff contact either Joe Seidel, Terri Miller or Lammot DuPont of my staff at (202) 226-3241.

Sincerely,

JAMES A. LEACH
Ranking Member

Mr. Alan Greenspan
Chairman, Board of Governors
Federal Reserve System

LIST OF QUESTIONS: Financial Derivatives Project

1) To supplement the discussion on "Supervision and Regulation of Derivatives" contained in Section III of the January 27, 1993 report issued jointly by the Federal Reserve, the FDIC, and the OCC entitled Derivative Product Activities of Commercial Banks ("Joint Report"), please address the following:

   a) In general, please summarize and provide the written policies and procedures currently used by your agency to regulate and monitor derivative activities of the institutions under your supervision. Also, please provide a summary of your regulatory authority over derivative transactions.[1]

   b) The Joint Report mentions that reporting requirements disclose the notional values of certain derivatives only, and therefore do not address the institution's actual exposures which may average approximately 2%-8% of the notional amount. What suggestions do you have for changing the reporting requirements to reflect actual exposures from derivative activities, including, but not limited to, credit exposure and market exposure? Do you feel any changes are needed?

   c) The Joint Report states that "... some reporting changes are under consideration. In particular, agency staff is reviewing the extent to which bilateral netting arrangements should be reflected in the reporting of replacement cost exposures. In addition, current efforts on interest rate risk in response to Section 305 of FDICIA will require increased disclosure of derivative exposures, and Section 308 requires banks to establish standards to evaluate their exposures to weak institutions, including those arising from derivative products."

      Please provide a detailed update on these and other reporting changes currently under consideration by your agency.

   d) Please discuss issues regarding payment, clearing, and settlement being

[1] The written policies and procedures requested should include those documents used in the examination process to assess, among other things, an institution's infrastructure for measuring and controlling risk, to assess an institution's front- and back-office processing regarding the pricing and valuation of derivative portfolios, and to require troubled institutions to minimize their existing risk and limit the size of new off-balance sheet activity. The documents should also include those which describe capital requirements as they relate to derivative activities. In addition, the documents should include those which define reporting requirements regarding derivative activities in Call Reports and Y-9C reports. The Joint Report mentioned that examiners have received considerable training and guidance aimed at off-balance sheet activities and have attended special courses and seminars addressing this issue. Materials provided as part of such training would also be helpful.

considered by the Payment and Settlement Committee organized by the Federal Reserve Bank of New York, and issues being considered by the Committees formed by the Board of Governors of the Federal Reserve and the New York Federal Reserve Bank mentioned in the Joint Report.

2) Please discuss in detail capital requirements, both current and proposed, as they relate to derivative activities of institutions regulated by your agency. Do you feel the current capital standards are adequate?

3) Please discuss which types of derivative instruments institutions under your jurisdiction are, and are not, permitted to utilize. Please distinguish between the types of derivatives institutions are, and are not, permitted to utilize for different functions including trading for customer accounts, trading (revenue) for their own accounts, and hedging for their own accounts. Please indicate the relative use of different derivative instruments by such institutions. In addition, please indicate the relative use of derivatives by such institutions for the different functions mentioned above.

4) Please discuss the benefits that may be realized from utilizing derivative instruments, such as using them for risk management and asset-liability management purposes.

Could the development and use of derivative products by savings and loans (S&Ls) and others have helped to prevent the S&L crisis? For example, could the use of interest rate swaps by S&Ls have helped them to sufficiently control duration and interest-rate mismatches? (Especially mismatches due to long-term mortgage assets yielding low interest rates being combined with short-term liabilities commanding high interest rates.)

5) a) What are your primary regulatory concerns regarding derivative activities of institutions supervised by your agency?

b) Do you believe that any fundamental changes in the current regulatory framework for institutions using derivatives is needed at this time?

6) Is there adequate coordination between U.S. and foreign regulators to regulate risks associated with derivatives? Does the BIS report of April 1993 address all of your agency's concerns in this area?

7) Individual derivative contracts, taken by themselves, include elements of risk. However, derivatives, when evaluated as part of an institution's entire portfolio, are often used to offset and reduce the overall risk exposure of an institution. How do your regulatory actions, including capital and accounting standards, take into account the use of derivatives reduce the overall risk exposure of an institution? For the purpose of regulation, how does your agency distinguish

between derivatives used to hedge and reduce overall risk, such as many over-the-counter (OTC) contracts, and derivatives used for trading and other purposes, such as many exchange-traded contracts?

8) Recently published reports on derivative activities, such as the July 1993 Group of Thirty report entitled Derivatives: Practices and Principles and the May 1993 Institute of International Finance, Inc. (IIF) report entitled An Integrated Regulatory Approach to Derivatives Activities stress the importance of internal controls over regulation in many areas. However, the Group of Thirty report has been criticized by some for relying too heavily on industry self-regulation.

   a) Regarding banks, the IIF report states, for example, that banks themselves should develop trading and credit policies that set their own risk limits. Do you think that such maximum risk limits should be set by institutions or by regulators?

   b) In general, to what extent, and in what areas, do you think regulators should rely on internal controls versus regulatory requirements?

   c) Do you feel that any of the "Recommendations for Dealers and End-Users" contained in the Group of Thirty report (Recommendations 1-20) should be formally mandated by regulation? Please comment on the different issues addressed in the recommendations with specificity.

9) Please comment on the four "Recommendations for Legislators, Regulators, and Supervisors" contained in the July 1993 Group of Thirty report (Recommendations 21-24) as they are relevant to your agency. Please comment on each recommendation separately.

10) If the July 1993 Group of Thirty "Recommendations for Dealers and End Users" (Recommendations 1-20) are not implemented by regulation, are there adequate mechanisms in place to ensure that such recommendations will be self-implemented? Concern has arisen regarding whether or not one can depend solely on the forces of managerial responsibility and market discipline as sufficient incentives to motivate firms to incur the implementation costs of the recommendations. Does your agency believe that mechanisms, such as periodic surveys of industry practice, a timetable for implementation, or a monitor of such actions are warranted?

11) Please comment on whether institutions should be required to establish separately-capitalized subsidiaries to conduct derivative activities.

12) Do you believe the netting provisions contained in the Bankruptcy Code, FIRREA, and FDICIA should be conformed to a single standard? Do the netting provisions in these statutes adequately cover all situations? If not, what situations do and don't they cover?

13) Recommendations contained in the July 1993 Group of Thirty Report (Recommendation 20) and elsewhere state that until harmonized accounting and disclosure standards are set, certain disclosures should be made by dealers and end-users. Although a disclosure regarding credit risk is recommended, a similar disclosure for market risk is not mentioned. Should a summary measure of market-risk exposure be disclosed? If so, what form should such a measure take?

14) Please comment on the notion of establishing a clearinghouse offset mechanism for swaps transactions. How would a clearinghouse offset separately effect dealers and end-users? Would either benefit more than the other?

15) Are there adequate mechanisms currently in place to protect unsophisticated end-users of derivative products? If not, what are your recommendations?

16) What kind of stress test simulations do you recommend to account for the different types of risk which arise as a result of financial derivative activity?

17) Please comment on your agency's view of the proper use and level of collateral in derivative transactions.

18) When assessing a counterparty for credit risk, how much relative emphasis should be placed upon factors such as capital, disclosure and credit rating? For example, should a credit rating be a proxy for capital?

19) Are executive decisions regarding derivatives, on average, concentrated in too few individuals in each institution to catch problems in a timely manner? Should the decision-making process, where derivatives are involved, be decentralized to enhance internal controls?

20) Do compensation policies currently in place adequately discourage undue risk-taking? For example, if employees benefit financially from risk-taking in a direct manner, how is such risk-taking controlled?

21) What is the level of systemic risk resulting from derivative activities? Do you agree with those who assert that derivative activities are concentrated in too few institutions?

22) Cash liquidity risk for a firm appears to be of greater concern the greater is a firm's involvement in derivative activities, the greater is its reliance on short-term

funding, the lower is its credit standing, and the more restricted is its access to central bank discount or borrowing facilities. Therefore, in contrast to depository institutions who, among other things, have access to the discount window, securities firms may find cash management requirements, such as maintaining margin requirements, arising from large derivatives portfolios to be more challenging. Compared to depository institutions, how does the less liquid nature of the securities business effect its derivative activities and the risks associated with such activities?

23) Criticism of speculators in the derivative markets, primarily exchange-traded derivatives such as currency futures and options, has focused on the alleged ability of such speculators to manipulate markets. Concerns have also arisen as to potential depository institution exposure as a result of speculators' activities. Please comment on these criticisms and whether or not such speculators should be subject to increased regulation or supervision.

24) What, if any, effect will the depositor preference provision of the Omnibus Budget Reconciliation Act of 1993 have on the derivatives market?

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ATTACHMENT D

The Office of the Comptroller of the Currency Response

Comptroller of the Currency
Administrator of National Banks

Washington, D.C. 20219

October 14, 1993

The Honorable James A. Leach
Ranking Minority Member
Committee on Banking, Finance
and Urban Affairs
U.S. House of Representatives
Washington, D.C. 20515

Dear Congressman Leach:

Thank you for your letter of August 9, 1993, requesting the OCC's assistance in preparing an informational study on financial derivatives. I am pleased to provide you with the OCC's responses to the twenty-four questions you asked of us.

Please contact us if we can be of further service to you.

Thank you.

Sincerely,

Eugene A. Ludwig

(1) To supplement the discussion on "Supervision and Regulation of Derivatives" contained in Section III of the January 27, 1993 report issued jointly by the Federal Reserve, the FDIC, and the OCC entitled Derivative Product Activities of Commercial Banks ("Joint Report"), please address the following:

(a) In general, please summarize and provide the written policies and procedures currently used by your agency to regulate and monitor derivative activities of the institutions under your supervision. Also, please provide a summary of your regulatory authority over derivative transactions.

OCC POLICIES AND PROCEDURES RELATING TO DERIVATIVES

Written policies and procedures used in the examination process differ depending upon whether the institution being examined is involved in the derivatives market as a dealer or as an end-user. The largest banks which we supervise generally act as both dealers and end-users, so both sets of examining policies and procedures are used.

Dealer Activities

The primary resource for supervision of dealer activities is the Chief's Office Source Book. Applicable sections of the Source Book include: Trading Activities, Arbitrage/Hedging Activities, Commodity Derivatives Markets, Foreign Currency Options and Risks, Comparative Risk Table and Risk Analysis Framework, which are attached as Appendix 1.

The procedures and guidelines contained in the Source Book can be adapted to trading portfolios of all types, including derivative products. The rapidly changing nature of the derivatives markets results in new products and changes in existing products on a continuous basis. However, the basic management concepts of accurate risk measurement systems, proper revaluation techniques, appropriate reporting lines, meaningful risk limits, and sound policies apply to all derivatives trading activities. The Source Book also addresses back-office controls, such as segregation of duties for transaction input, confirmation generation and report preparation. The procedures and guidelines in the Source Book establish a sound framework for the examination of derivative trading activities of national banks.

End-User (Risk Management) Activities

The primary resources for evaluating end-user activities are the Chief's Office Source Book and Comptroller's Handbook for National Bank Examiners. The applicable sections of the Source Book include: Interest Rate Risk Management and Liquidity Risk Management, which are attached as Appendix 2. The applicable sections of the Comptroller's Handbook are those that provide guidance for examining risk management activities: Section 405 - Funds Management and Section 813 - Foreign Exchange, which are attached as Appendix 3.

An additional resource for examiners responsible for reviewing derivatives used for risk management purposes is Advisory Letter 90-1: Interest Rate Risk, which is attached as

Appendix 4. The Advisory Letter outlines OCC expectations that national banks have adequate systems to monitor and control their interest rate risk exposures.

Dealer and End-User (Risk Management) Activities

There are three resources that provide guidance for examining derivatives activities at dealer and end-user institutions. OCC Banking Circular 79, which is attached as Appendix 5, addresses the policies and procedures required of national banks that engage in financial futures contracts, forward placement contracts or standby contracts. Regulatory accounting treatments for these products are also addressed. OCC Banking Circular 228, which is attached as Appendix 6, outlines supervisory policies for mortgage derivative products and stipulates that securities trading activities (including trading in mortgage derivative instruments) should only be conducted in a closely supervised trading account by banks with strong capital and earnings and adequate liquidity. The Comptroller's Handbook for National Bank Examiners, Section 203 - Investment Securities, which is attached as Appendix 7, provides general examination guidelines for banks using futures, forwards and options in trading activities and for risk management purposes.

Finally, reference documents are available for examiners reviewing derivatives activities. One such resource, provided to all examiners and all national banks, is An Examiner's Guide to Investment Products and Practices. This Guide describes derivative products, markets, risks and applicable policies and procedures on pages 81 through 98, which are attached as Appendix 8.

Please refer to the responses to Questions #1(b), #1(c), and #2 for a complete description of capital requirements and reporting considerations.

OCC TRAINING RELATING TO DERIVATIVES

OCC bank examiners receive training and guidance with respect to off-balance sheet activities through courses in bank supervision, which address derivatives in addition to other instruments and activities, and on-the-job training.

Training Programs specifically addressing off-balance sheet activities which are available to OCC examiners include:

- Assistant National Bank Examiner School
- Bank Supervision School
- Basic International Banking (FFIEC)
- FFIEC Emerging Issues Conference
- Intermediate Asset/Liability Management
- International Banking School (FFIEC)
- Mortgage Backed Securities and Collateralized Mortgage Obligations
- Off-Balance Sheet Risk Conference (FFIEC)

Additionally, the OCC has identified a cadre of examiners who specialize in examining capital markets activities of banks, including off-balance sheet activities. This group receives specialized training on an ongoing basis, the primary forums for which are an annual capital markets seminar and periodic seminars on specialized topics. These seminars include speakers from within the agency, as well as industry experts. Recent topics that have related to derivative products, include:

- Mortgage Banking Pipeline Management and Hedging
- Amortizing Interest Rate Swaps
- Credit Risks in Capital Markets Transactions
- Credit Risk Management of Capital Markets Products
- Managing Aggregate Trading Risks
- Hedging (Mortgage) Prepayment Risks
- Bankers' Perspectives of Interest Rate Risk
- Off-Balance Sheet Alternatives to Cash Market Collateralized Mortgage Obligations
- Hedging (Mortgage) Servicing Runoff Using Option-Adjusted Analysis
- Hidden Liquidity Risks
- Use of Synthetic Swaps in Bank Portfolios
- Commodity Swaps
- Examination Issues in Off-Balance Sheet Products
- Liquidity Management in a Distressed Environment
- Integrated Risk Management

These capital markets specialists are provided with reference materials which assist them in their examination work in securities and derivatives. Recent materials made available to these specialists include The Money Market by Marcia Stigum and The Handbook of Fixed Income Securities, edited by Frank Fabozzi.

Each specialist also receives a quarterly Capital Markets Newsletter published by the OCC's Chief National Bank Examiner's office. The newsletter often includes feature articles on derivatives and provides an annotated bibliography of the most interesting articles on derivatives published in various periodicals and industry publications during the prior quarter. These articles are available to examiners upon request.

On-the-job training, through participation in onsite examinations, provides the strongest background and knowledge base to an examiner. OCC examinations at the largest trading banks are deliberately staffed with a mix of very experienced to modestly experienced examiners. In addition, examiners are frequently rotated among districts and institutions to provide exposure to different derivative activities, risk management systems, technological systems, etc. This process provides substantive training to inexperienced examiners, while allowing more specialized examiners to stay abreast of current developments in the derivatives markets.

REGULATORY AUTHORITY OVER DERIVATIVE TRANSACTIONS

The authority of the OCC to regulate the derivatives activities of national banks is derived from the Comptroller's authority to regulate national banks, generally. As one court has noted:

> "The banking laws grant the OCC . . . sweeping supervisory and enforcement powers . . . The supervisory authority of the Comptroller extends over all aspects of a bank's existence." In Re: Franklin National Bank Securities Litigation, 478 F. Supp. 210, 217 (E.D. NY 1979).

In addition, the OCC has the express statutory authority to "prescribe rules and regulations to carry out the responsibilities of the office," and to enforce national bank compliance with relevant statutes and regulations through a wide array of enforcement remedies. See 12 U.S.C. 93a and 1818.

(b) The Joint Report mentions that reporting requirements disclose the notional values of certain derivatives only, and therefore do not address the institution's actual exposures which may average approximately 2-8% of the notional amount. What suggestions do you have for changing the reporting requirements to reflect actual exposures from derivative activities, including, but not limited to, credit exposure and market exposure? Do you feel any changes are needed?

Notional and Par Value Disclosures

While not intended to measure credit or market risks, disclosure requirements calling for notional and par value data provide useful information regarding the volume, nature, and trends of bank derivative activities (see Schedule RC-L of the Call Report, attached as Appendix 9). Financial analysts and other parties utilize notional and par value data to monitor these derivative activities. Examiners utilize such data in formulating supervisory plans and initiatives. Notional and par values can be indicators of a bank's entrance into new markets and the expansion of lines of business. These amounts serve the same purpose as indicators for the general marketplace. We believe these disclosures are beneficial, simple to obtain, and should not be eliminated.

Credit and Market Exposures

Credit equivalent exposures are currently summarized and evaluated in conjunction with the calculation of risk-based capital. These exposures may be calculated using the information reported on schedule RC-R of the Call Report, which is attached as Appendix 10.

Information related to interest rate risk (IRR) exposures of derivatives will be disclosed and evaluated under proposed revisions to risk-based capital standards in response to Section 305 of FDICIA. The OCC is working with the FDIC and Federal Reserve Board (the banking agencies) on these proposed revisions and the banking agencies' joint notice of proposed rulemaking on IRR was published in the Federal Register for comment on September 14, 1993. The reporting

requirements envisioned in this proposal are summarized in our response to Question #1(c), below. The banking agencies have proposed implementing reporting requirements for IRR effective with the March 31, 1994 Call Report, and making revised capital requirements for IRR effective on December 31, 1994. The public comment period for this proposal closes on October 29, 1993. The actual dates for implementing new reporting and capital requirements will, of course, depend on the timing of the issuance of a final rule.

In addition to the domestic effort on IRR discussed in response to Question #1(b), the OCC is also participating in the effort of the Basle Committee on Bank Supervision (the Basle Committee) to develop revised capital requirements for the market risk in banks' trading portfolios (including derivatives) and foreign exchange activities. The Basle Committee released consultative papers on these efforts in April, 1993. The initial consultative period for these papers closes on December 31, 1993. These efforts, if adopted, will likely result in increased reporting disclosures for the market risks associated with derivative activities in trading portfolios and foreign exchange contracts. These proposals are discussed more fully in our response to Question #2.

The OCC does not believe that current reporting requirements provide adequate "public" disclosure of financial derivatives exposures, and is exploring the need for expanded disclosures or different disclosures than those discussed above. The OCC wants to clarify, however, that as supervisor of national banks it has regular access to quality information that enables the OCC to supervise those national banks that are financial derivatives dealers. This information is tailored to the volume and risks at each bank, and is regularly analyzed by examiners assigned to these institutions.

(c) **The Joint Report states that "...some reporting changes are under consideration. In particular, agency staff is reviewing the extent to which bilateral netting arrangements should be reflected in the reporting of replacement cost exposures. In addition, current efforts on interest rate risk in response to Section 305 of FDICIA will require increased disclosure of derivative exposures, and Section 308 requires banks to establish standards to evaluate their exposures to weak institutions, including those arising from derivative products." Please provide a detailed update on these and other reporting changes currently under consideration by your agency.**

Replacement Cost Exposures

Current risk-based capital calculations for derivative instruments permit the netting of replacement cost exposures of multiple contracts with a single counterparty only if those contracts are subject to novation. The OCC is participating in the Basle Committee's evaluation of bilateral netting arrangements and anticipates issuing a notice of proposed rulemaking by the end of this year to solicit public comment on the issue of whether the risk-based capital guidelines should be amended to recognize bilateral netting arrangements. The proposed rule would permit

netting of replacement cost exposures for contracts entered into under a legally enforceable master netting agreement.

FDICIA Section 305

As noted in our response to Question #1(b) above, the U.S. banking agencies' proposal on interest rate risk, currently out for comment, would result (if adopted) in increased disclosure of derivative exposures. The reporting format under consideration would require institutions to report assets, liabilities, and off-balance sheet items across seven maturity ranges (time bands) based on the time remaining to maturity or the next repricing date. A copy of the proposed reporting schedule is attached as Appendix 11[1].

As proposed, institutions would be required to report off-balance sheet positions across the time bands of the reporting schedule. Derivative instruments with option characteristics (e.g., swaptions, caps, floors and collars) would be reported separately from those representing firm commitments (e.g., swaps, futures, and forward rate agreements). Mortgage-related fixed-rate commitments and other off-balance sheet derivative instruments whose value depends on the value of an underlying asset or index with amortizing characteristics also would be reported separately. Derivatives held in trading portfolios would be reported separately from derivatives used to manage a bank's overall interest rate risk profile.

Futures, forwards, options, and firm commitments to buy or sell loans and securities would be reported using two entries with opposite signs, indicating a long and a short position. Futures, forwards, and options would have one entry reported in the time band corresponding to the settlement date of the contract plus the maturity of the underlying instrument, and an offsetting entry in the time band that corresponds to the settlement date of the contract. For example, a bank that buys a 5-year Treasury note futures contract for delivery in two months would record this position as a long position in the 5- to 7-year time band (the bank is long or "owns" the 5-year note) and a short position in the 1- to 3-month time band (to represent the financing cost if the bank purchases the note).

Interest rate swaps, caps, and floors would also be reported using two separate entries. with one entry reported in the time band corresponding to the maturity of the instrument and an offsetting entry in the time band corresponding to the next repricing of the floating side of the instrument. For example, a 2-year interest rate swap, where a bank receives a floating rate quarterly and pays the fixed rate, would be treated as a long position (positive, because the bank is receiving the

[1]An exemption from any additional reporting requirements is proposed for any bank that meets the following two criteria: (a) The total notional amount of its off-balance-sheet interest rate contracts does not exceed 10 percent of its total assets; and (b) A 15 percent "haircut" applied to the sum of its fixed- and floating-rate loans and securities that mature or reprice beyond five years is less than 30 percent of total capital.

cash flow) in the 1- to 3-month time band and a short position (negative, because the bank is paying the cash flow) in the 1- to 2-year time band.

The dollar amounts reported for instruments with option characteristics would be derived using one of two alternative methods. The first method would require the reporting of positions using delta-equivalent values[2]. The second reporting alternative would require the reporting of positions only if, on the report date, the index rate or the rate to be received is within 100 basis points of the strike rate (price). Under this alternative, if the position is reported, the notional value would be used. The banking agencies have requested comment on this reporting methodology as well as the use of delta-equivalent values for off-balance sheet positions with option characteristics.

As noted in the proposed rule for section 305, the OCC expects banks that engage in significant off-balance sheet activities to have internal systems, including options pricing models, which can properly value the types of transactions used in their risk management activities. Accordingly, for purposes of section 305, the OCC has proposed to allow banks to estimate the interest rate sensitivity of off-balance sheet instruments using internal models and is considering a separate Call Report schedule for reporting internal model results. In this supplemental schedule, banks would report their own estimated changes in the market values of their derivative positions for a specified increase and decrease in interest rates. A copy of the schedule under consideration is attached as Appendix 12.

FDICIA Section 308

Regulation F, 12 CFR 206, attached as Appendix 13, implements section 308 of FDICIA, which required the Board of Governors of the Federal Reserve System (FRB) to prescribe standards to limit the risks posed by exposure of an insured depository institution to other depository institutions. The regulation, as issued by the FRB, consists of two primary parts: Prudential Standards (Section 206.3), which became effective on June 19, 1993, and Credit Exposure (Section 206.4) which will be phased in beginning June 19, 1994.

The "Prudential Standards" section requires banks to develop and adopt internal policies and procedures to evaluate and control exposure to the correspondents banks with which they do business. The procedures must provide for the consideration of liquidity, credit, and operational risks. Exposures arising from derivative contracts should be included within the scope of these procedures.

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[2]The delta value of an option represents the expected change in the option's price as a proportion of a small change in the price of the underlying instrument. An option whose price changes by $1 for every $2 change in the price of the underlying instrument has a delta of 0.5. The delta-equivalent value of an option position is equal to the option's delta multiplied by its principal or notional amount.

The "Credit Exposure" section requires a bank to implement internal policies and procedures that limit correspondents' "credit exposure." This exposure is limited to 25 percent or less of the exposed bank's capital, unless the bank can show that the correspondent is at least "adequately capitalized." June 19, 1994 is the date by which banks must begin to limit credit exposure to correspondents which are not at least "adequately capitalized." Initially, the limit will be set at 50 percent of the exposed bank's capital. On June 19, 1995, this limit declines to 25 percent. All derivative contracts for which a bank must maintain capital under the risk-based capital guidelines (i.e., those contracts that expose the bank to counterparty risk) are included in determining a bank's credit exposure to a correspondent.

No regulatory reporting changes have been adopted in conjunction with Regulation F. Banks' compliance with this regulation will be monitored by the OCC through the examination process.

Other Reporting Changes

Financial reporting changes currently under consideration by the OCC include permitting the netting of balance sheet amounts for derivative financial instruments. The Financial Accounting Standards Board (FASB) recently issued Interpretation #39 (FIN #39) which permits netting to the extent that the agreements governing the relationship between the parties contain a legally enforceable netting provision. Adoption of the FIN #39 netting criteria is effective beginning January 1, 1994.

In addition, the OCC is considering the regulatory accounting treatment of various financial derivative instruments. The OCC is concerned that definitive accounting standards for many derivatives have not been issued by the FASB. Due to the lack of accounting standards in this area, derivatives (especially swaps) are not consistently accounted for from one institution to the next.

(2) **Please discuss in detail capital requirements, both current and proposed, as they relate to derivative activities of institutions regulated by your agency. Do you feel the current capital standards are adequate?**

The OCC has some concerns that capital standards for derivatives may not adequately reflect risks. Under the current risk-based capital (RBC) guidelines, there is an explicit capital charge for the credit risk (counterparty risk) exposure of over-the-counter (OTC) derivative products. This capital charge applies to interest rate and foreign exchange (FX) swaps, forward rate agreements (FRAs) and purchased interest rate and FX options. The treatment has been extended to apply to newer derivative products, including commodity and equity index swaps.

The OCC believes that the inclusion of off-balance sheet counterparty exposures into capital standards was an important and necessary step in ensuring that adequate capital is maintained by banks for derivatives activities. However the OCC also recognizes that the current standards (see the discussion under the "Credit and Market Risk" section of the response to Question #1(b)

above) do not explicitly consider market risk, and that as new products or activities emerge in the derivatives markets, the RBC standards may need revision. Hence, the OCC is actively involved in several regulatory capital initiatives addressing shortcomings in the current RBC standards that, if adopted, would result in modifications to the current RBC treatment for derivatives. The scope of these initiatives includes the appropriate treatment of credit and market risk. They are being pursued jointly with the other US banking agencies and with international banking supervisors through the Basle Committee. Given the truly global nature of derivative markets, the OCC strongly believes that equivalent capital regulations among banking agencies and countries is desirable to prevent competitive inequalities and to ensure prudential banking standards in all major markets.

The initiatives that are being studied or developed are described below. The OCC believes that these initiatives, if implemented, will enhance regulatory capital standards for, and supervision of, financial derivatives activities. However, the OCC believes that the importance and complexity of these proposals demand that we provide sufficient opportunities for public review and comment on the proposals. The OCC will carefully consider these comments before adopting any proposals.

The initiatives that are being studied or developed are:

CREDIT RISK

(a) The Basle Committee Proposal on Netting would recognize legally enforceable bilateral netting arrangements when computing a bank's counterparty credit risk exposure in derivatives. Presently, only netting by novation is permitted. Although this proposal would have the effect of reducing the current capital charge for certain derivatives, the OCC believes that this proposal, by encouraging the use of enforceable bilateral netting arrangements, will reduce the level of settlement, and hence, systemic risk in the derivatives markets.

The Basle Committee released a consultative paper on this proposal in April, 1993. The OCC anticipates issuing a notice of proposed rulemaking on this topic by year-end.

(b) The Basle Committee Sub-Group on Off-Balance Sheet Activities is reviewing the current RBC treatment of derivatives for counterparty risk. This review could lead to recommended changes in the factors used to estimate "potential future" counterparty risk for some financial derivatives.

This work is still under discussion by the Basle Committee's sub-group and no formal proposal has yet been made.

(c) The OCC recently published a Notice of Proposed Rulemaking on Collateralized Transactions, which would amend the RBC guidelines to lower the risk weight from 20 percent to zero percent for particular transactions that are collateralized by cash or

government securities. This RBC treatment would more accurately reflect the minimal operational risk and the near absence of credit risk for certain transactions. Although not specifically listed as a type of transaction covered by the proposed rule, the OCC requested comment upon, and is considering including, collateralized financial derivatives counterparty exposures among the transactions that could receive a zero percent risk weight. We anticipate working with the FRB and FDIC to ensure a uniform application of our respective collateralized transactions rules. The FRB's final rule was published year-end 1992.

MARKET RISK

(a) The FDICIA Section 305 Proposal, discussed above in response to Question #1(c), would establish a system for measuring a bank's overall interest rate risk exposure and would provide a basis for requiring capital for exposures that exceed a threshold level. Derivatives would be included in the risk measure.

The US banking agencies issued a joint notice of proposed rulemaking on this proposal on September 14, 1993. The comment period for the proposal closes on October 29, 1993.

(b) The Basle Committee Proposal on Market Risk for Trading Books would incorporate a capital charge for the market risk of equity and debt derivatives that are part of a bank's trading activities. This charge would be in addition to the current RBC charge for counterparty (credit) exposures. The charge would not be applied to derivatives held outside of trading portfolios, such as those used to hedge structural balance-sheet positions.

The Basle Committee issued a consultative paper on this proposal in April, 1993. The consultative period closes December 31, 1993. Any modifications to the OCC's current RBC guidelines that might result from this proposal will be issued for full public comment through the rulemaking process. The OCC will carefully consider these comments before adopting any proposals.

(c) The Basle Committee Proposal on Foreign Exchange Risk would introduce a capital charge on a bank's net open foreign currency and precious metals positions. Any foreign exchange or precious metals derivative instrument would be included in determining a bank's net open position. This charge would be in addition to any applicable counterparty or market risk capital charges currently under consideration by the Basle Committee.

The Basle Committee issued a consultative paper on this proposal in April, 1993. The consultative period closes December 31, 1993. Any modifications to the OCC's current RBC guidelines that might result from this proposal will be issued for full public comment through the rulemaking process. The OCC will carefully consider these comments before adopting any proposals.

Appendix 14, Capital Treatment for Derivatives, provides greater detail on the current RBC treatment for derivatives and on the FDICIA Section 305 and Basle Committee's Market Risk Proposal.

(3) **Please discuss which types of derivative instruments institutions under your jurisdiction are, and are not permitted to utilize. Please distinguish between the types of derivatives institutions are, and are not, permitted to utilize for different functions including trading for customer accounts, trading (revenue) for their own accounts, and hedging for their own accounts. Please indicate the relative use of different derivative instruments by such institutions. In addition, please indicate the relative use of such derivatives by such institutions for the different functions mentioned above.**

National banks and their subsidiaries have the authority to enter into a wide array of derivatives transactions and instruments, both for their own accounts and to accommodate their customers. Financial derivatives may be broadly defined as financial instruments that derive their values from the performance of other assets, rates or indexes, and include a wide assortment of types of financial contracts, including structured debt obligations and deposits, swaps, futures, options, caps, floors, collars, forwards, and various combinations thereof. See, Securities and Exchange Commission Concept Release No. 34-32256, 58 Fed. Reg. 27486, 27487 (May 10, 1993) and sources cited therein.

A national bank may enter into derivatives transactions as principal in order to hedge risk exposures arising from its investment portfolio or non-dealer operations. In addition, a national bank may enter into derivatives transactions for its own account as an incident to its authorized dealer-bank trading activities, where the bank may lawfully purchase and sell the underlying instrument or product for its own account. This would include, for example, derivative instruments in U.S. Government securities, foreign exchange and bank-eligible precious metals.

A national bank is also authorized to enter into derivative transactions as agent for its customers, or as principal in transactions where the bank is serving as a financial intermediary for its customers, whether or not the bank has the power to act as principal for its own account with respect to the underlying instrument or product. Thus, for example, the OCC has permitted national banks to establish operating subsidiaries that function as futures commission merchants by soliciting, accepting, and executing customer orders for futures and options. The OCC has also permitted national banks to enter into matched and unmatched commodity price index swap transactions in order to assist their customers in limiting certain financial risks resulting from fluctuations in commodity prices, and to hedge such transactions on a portfolio basis.

In general, national banks are permitted to use derivative products so long as the activities specified in the preceding paragraph are consistent with the bank's policies and procedures, and safe and sound banking practices. The relative use of different derivative instruments by national banks and the different functions for which they are used vary from bank to bank based on customer demand, market conditions, competition, and the extent of the bank's dealer activities,

attached as Appendix 15. The OCC notes, however, that larger national banks engage in a large amount of sophisticated functions involving a wide variety of complex derivative instruments, such as cross-currency interest rate swaps, while smaller banks are more likely to be involved in "plain vanilla" derivatives transactions (such as exchange-traded futures, fixed/floating interest rate swaps, and interest rate caps and floors) for risk management purposes.

(4) **Please discuss the benefits that may be realized from utilizing derivative instruments, such as using them for risk management and asset-liability management purposes.**

Could the development and use of derivative products by savings and loans (S&Ls) and others have helped to prevent the S&L crisis: For example, could the use of interest rate swaps by S&Ls have helped them to sufficiently control duration and interest-rate mismatches? (Especially mismatches due to long-term mortgage assets yielding low interest rates being combined with short-term liabilities commanding high interest rates.)

The growth of derivatives markets over the past several years has increased financial market efficiency and provided market participants with an expanded array of tools for risk management. Financial institutions can use derivative transactions to broaden their access to capital markets, thereby increasing their possibilities for efficient funding and investing.

Some derivatives transactions enable users to reduce their costs through financial arbitrage. Each party taps the market where it can obtain the best relative terms and then adjusts its obligations to obtain the most desired financial structure.

Financial institutions aiming to reduce their risk can, through proper use of derivative instruments, disaggregate the risks that are often found in traditional financial instruments, and transfer such risks to parties that are better suited or more willing to take on and manage those risks.

If derivatives markets had been well-developed 15 years ago, S&Ls that had the objective of reducing their risks might have been able to use derivatives to reduce substantially the losses they suffered in the late 1970s and early 1980s. Today, S&Ls funding their fixed-rate mortgage portfolios with short-term deposits can use derivatives instruments to reduce their interest rate risk. For example, an S&L can swap its floating-rate payments on its short-term deposits for fixed interest rate payments, or it can swap the fixed-rate income it receives from its mortgage loans for floating-rate interest income. In both cases, the institution can better match the income stream on its assets to the payment stream on its liabilities, and it can reduce the risk of capital loss that could result from an unexpected rise in interest rates.

(5) (a) What are your primary regulatory concerns regarding derivative activities of institutions supervised by your agency?

The OCC's general regulatory concerns regarding derivatives activities of national banks are that:

(i) banks that engage in derivatives transactions, either as dealers, end-users or both, should appropriately manage the credit, market, liquidity, operational and settlement risks arising out of derivatives transactions and have exposure limits to control these risks;

(ii) banks should maintain the appropriate level of capital to cushion the impact of unanticipated losses arising out of their derivatives transactions;

(iii) individually, banks should engage in derivatives transactions in a manner that does not negatively affect the safety and soundness of the U.S. banking system, as well as that of the individual bank;

(iv) banks that engage in derivatives transactions should have the sophistication and expertise, including both human resources, and systems and operations capability, to understand the complexity of the transactions in which they engage and manage the risks they are incurring; and

(v) the Board of Directors and senior management of a bank should understand the risks of dealing in financial derivatives transactions, have approved a strategy for engaging in such transactions, and are providing proper oversight of a bank's financial derivatives activities.

More specifically, the OCC wants to ensure that all banks, including smaller banks that are less experienced in the activity, are properly using financial derivatives instruments to lower their funding costs, diversify funding sources, and to reduce and manage the risks to which they are exposed by virtue of their other banking activities, and not to take positions that unduly expose them to changes in interest rates, currency rates, or equity or commodity prices.

Acting as a dealer, and managing a portfolio of derivatives transactions, exposes a national bank to risks in a greater amount and of a much greater complexity than those to which it is exposed when it engages in derivatives transactions as an end-user. Therefore, the OCC is concerned because some national banks that have been engaging in derivatives transactions for the limited purposes of risk reduction and risk management, but have begun to act as financial intermediaries (dealers) as an additional service or accommodation to their customers, may not have the systems and the qualified personnel necessary to engage in such business.

(b) **Do you believe that any fundamental changes in the current regulatory framework for institutions using financial derivatives is needed at this time?**

The OCC does not believe that fundamental changes in the current regulatory framework for national banks are needed at this time by virtue of their transactions in financial derivatives. The OCC does believe, however, that certain improvements in regulatory supervision of derivatives activities are appropriate at this time.

Financial derivatives, properly used, can provide national banks with substantial benefits. They can provide banks and their customers with greater flexibility in managing their risks by disaggregating risks that are found in various types of financial instruments and services, and transferring those risks to parties who are more willing, or better suited, to take or manage such risks. In addition, financial derivatives transactions often provide users with the lowest cost funding alternatives by reducing transaction costs and, in some cases, by exploiting arbitrage opportunities across financial markets. Further, banks can efficiently use derivatives to reduce undesirable exposures to factors such as interest rate changes or currency fluctuations. The OCC encourages the use of derivatives by national banks for such purposes.

However, the derivatives activities of U.S. financial institutions have appropriately raised concern at the OCC, as well as at the other U.S. (and foreign) supervisors of financial institutions. The basis for this concern is the rapid growth of the financial derivatives market over a relatively short period of time and the complexity of many financial derivatives transactions. In addition, financial derivatives transactions have been a source of substantial revenue for a handful of larger institutions who have acted as dealers in the market. Recent history has shown that even the largest and most sophisticated financial institutions do not necessarily exercise sound judgement in entering into financial transactions that have the potential to be very profitable and that they sometimes fail to manage and control properly their risks in fast-growing markets.

Financial derivatives also raise supervisory concerns because of their complexity. The risks to which U.S. banks are exposed by virtue of their financial derivatives activities are risks to which they are already exposed, and which they are currently managing, in connection with many other client-related activities (including making loans to agricultural institutions, issuing letters of credit to support the foreign obligations of U.S. institutions and establishing lines of credit for broker-dealers), as well as in connection with proprietary activities (such as funding their operations and managing their assets and liabilities). However, because of the linkages inherent in most derivative transactions between the various types of risks and exposures -- risks and exposures which have heretofore been managed separately and distinctly -- they present challenges to traditional systems and procedures for risk management. Many of these linkages exist in connection with other bank activities, but they are less obvious. Financial derivatives bring the linkages between these risks into focus. The institution that can not see these linkages and does not establish the systems to monitor and manage the covariances between these risks, exposes itself to the possibility of excessive loss and, depending upon the institution's size, poses a potential threat to the safety and soundness of the other financial institutions that deal with it.

However, these problems and concerns do not necessarily lead to the conclusion that fundamental changes either in the law or the regulatory framework are needed at this time. In fact, the OCC believes that changes in the U.S. regulatory scheme that are enacted without careful consideration could deprive U.S. financial institutions (both financial and otherwise) of enhanced ability to manage risk, as well as restrict the flexibility of U.S. banks to be innovative and creative in developing risk management products that meet the constantly changing needs of their clients. In addition, the OCC believes that most of the dealers of financial derivatives have good risk management systems.

The OCC believes it is essential that banks engaging in financial derivatives transactions have the qualified personnel and proper systems in place. The OCC believes these issues are best addressed by providing guidance to banks engaging in derivatives transactions as to the types of systems and controls that the OCC considers appropriate in connection with the management of credit, market, liquidity and operating risks, and by alerting national banks to significant legal issues associated with engaging in derivatives transactions and its expectations as to how these issues should be addressed. The OCC has issued examiner guidance on many of these issues (described in the answer to question #1) that banks have used for their own reference, and the OCC intends to issue guidance to banks in the near future.

In addition, bank examiners have always played a significant role in the exercise of the OCC's supervisory powers. In fact, through the examination function, the OCC has been successful recently in encouraging some banks that are active in financial derivatives transactions to establish the kinds of internal controls and senior management oversight that the OCC believes are crucial. The OCC intends to strengthen its supervisory oversight of banks' financial derivatives activities by providing additional guidance and training to its examiners. It is expected that new examiner guidance will be issued within the next few months.

(6) **Is there adequate coordination between U.S. and foreign regulators to regulate risks associated with derivatives? Does the BIS report of April 1993 address all of your agency's concerns in this area?**

There is adequate coordination between U.S. and foreign regulators on the important issue of the appropriate level of capital required to support a bank's derivatives activities. This coordination has occurred through the BIS and the Basle Committee. Although all the proposals and initiatives of the BIS and the Basle Committee do not necessarily specifically address financial derivatives transactions, they attempt to address the credit risks and the market risks to which a bank engaging in financial derivatives transactions is exposed.

The BIS reports of April 1993 address the capital required in connection with an estimation of credit risk and certain market risks, and therefore, together with existing capital rules, address most of our concerns with respect to capital adequacy for derivatives.

Additional international coordination could be helpful to derivatives markets participants and regulators in connection with the appropriate accounting treatment and the proper disclosure in connection with financial derivatives positions. However, these issues must first be addressed and resolved in the U.S. before an international effort could prove fruitful.

(7) **Individual derivative contracts, taken by themselves, include elements of risk. However, derivatives when evaluated as part of an institution's entire portfolio, are often used to offset and reduce the overall risk exposure of an institution. How do your regulatory actions, including capital and accounting standards, take into account the use of derivatives to reduce the overall risk exposure of an institution. For the purpose of regulation, how does your agency distinguish between derivatives used to hedge and reduce overall risk, such as many over-the-counter (OTC) contracts, and derivatives used for trading and other purposes, such as many exchange-traded contracts?**

A primary goal of OCC supervision is to ensure that bank management properly manages risk-taking. OCC regulatory actions seek to ensure that banks properly identify, measure, monitor and control their risks.

OCC supervisory policies related to dealers and end-users require national banks to have adequate risk management systems. As described in the response to Question #1(a), those policies are set forth or otherwise reflected in the following documents: Banking Circular 79; Advisory Letter 90-1; Comptroller's Handbook for National Bank Examiners, Chief's Office Source Book, and An Examiner's Guide to Investment Products and Practices.

Specifically, the OCC requires that banks' risk management systems include:

- Board-approved policies that outline the derivatives activities in which the bank may engage, and Board-approved limits which specify the maximum amount of earnings or capital that may be put at risk. Those policies and limits should distinguish between trading activities and positions established for risk management purposes.

- Risk measurement and limit systems that enable the bank to adequately identify and correctly quantify the level of risk associated with its trading and non-trading activities. and procedures to ensure adherence to policies and limits.

- Production of timely and accurate reports on the level of risk that the bank is taking and on the bank's adherence to limits and policies.

In general, the OCC evaluates both the bank's policies and procedures in the area of risk management and the appropriateness and adequacy of its risk measurement and monitoring systems (e.g., net income and market value simulation analyses, trading risk measurement systems and controls, and for some community and regional banks, gap analyses).

The OCC is currently drafting additional guidance to examiners on derivatives products. This guidance will be distributed within the next few months.

Capital Standards

Current risk-based capital standards explicitly address only credit risk. However, as mentioned above in the response to Question #2, the OCC (in conjunction with the FDIC and the FRB) has published a proposal to implement the portion of Section 305 of the FDICIA that requires a revision of the RBC guidelines to ensure that those standards take adequate account of IRR. The OCC is also participating in the effort by the Basle Committee to develop international standards for the supervision of market risk.

Under the IRR proposal, the OCC would use some combination of a supervisory model and the bank's own model to measure the level of a bank's risk exposure. A bank's derivative transactions would be factored into the calculation.

The proposal measures an institution's overall interest rate risk exposure and addresses both trading and non-trading portfolios. Under the proposal, OCC would require banks with a measured net exposure exceeding a threshold amount to have sufficient capital to cover that "excess" exposure. Alternatively, when a bank uses derivatives to reduce its "excess" exposure, the OCC would reduce the capital charge to reflect the amount of risk reduction.

The Basle Committee's proposal addresses the level of market risk arising from an institution's trading activities. The proposal would measure market risk on a portfolio basis and would include derivative contracts associated with a bank's trading activities. In addition, the proposal would also require a bank to hold sufficient capital to cover market risk associated with its trading activities. If such activities increase the level of market risk in its trading operations, the bank would be required to hold more capital.

Accounting Standards

With the exception of futures and forwards used to hedge mortgage banking operations, regulatory accounting standards do not yet formally recognize hedge accounting for many derivative instruments that are used by banks to reduce their overall risk. In the case of futures and forwards used to hedge mortgage banking operations, the hedges are recognized through an accounting treatment which permits the deferral of market value gains and losses on the derivative instrument until a corresponding gain or loss is recognized on the underlying loans. Hedge accounting is not permitted for options.

Industry accounting, generally accepted accounting principles (GAAP), and regulatory accounting principles (RAP), for swaps used for risk management has developed by analogy to accounting for futures. Some institutions use hedge accounting treatment only under conditions of risk reduction and others use hedge accounting treatment on the basis of risk management. Please

refer to the discussion above in response to Question #1(c) regarding changes in regulatory accounting standards for derivatives currently under consideration.

(8) Recently published reports on derivative activities, such as the July 1993 Group of Thirty report entitled Derivatives: Practices and Principles and the May 1993 Institute of International Finance, Inc. (IIF) report entitled An Integrated Regulatory Approach to Derivatives Activities stress the importance of internal controls over regulation in many areas. However, the Group of Thirty report has been criticized by some for relying too heavily on industry self-regulation.

(a) Regarding banks, the IIF report states, for example, that banks themselves should develop trading and credit policies that set their own risk limits. Do you think that such maximum risk limits should be set by institutions or by regulators?

As stated above in response to Question #5(a), the OCC does not believe that risk management procedures and controls, including credit and market risk limits, should be established by regulation at this time. Such matters are more appropriately left to the applicable credit and market risk units and senior management, acting in accordance with the strategy for engaging in financial derivatives transactions approved by a bank's Board of Directors and consistent with the bank's general risk management policy. The OCC believes that the credit risk to which banks are generally exposed by virtue of their financial derivatives transactions is substantially less than their credit risk exposure arising out of other off-balance sheet activities, many of which are not subject to limits imposed by regulation, see Appendix 16.

The information contained in Appendix 16 indicates commercial banks' current credit risk exposure from selected off-balance sheet contracts, using information reported on the June 30, 1993 call report. For interest rate and foreign exchange contracts, the amount in the chart is the replacement cost of outstanding contracts – the amount of future gain the bank would lose if the counterparty defaulted on the contract. When using the replacement cost measure, derivative products expose commercial banks to much less credit risk than other types of off-balance sheet commitments.

Unlike loan commitments and letters of credit, it is possible that banks' credit exposure on interest rate and foreign exchange contracts might increase because of future movements in rates. However, even if the potential future credit exposure is added to replacement cost, the credit risk exposure from derivatives is still much less than the exposure from other off-balance sheet commitments. That potential future exposure can be estimated using the calculations in the OCC's risk-based capital standards. Under those standards, the credit exposure for interest rate contracts increases by 0.5% of the notional amount of contracts with a remaining maturity over one year that are not traded on exchanges with daily margin requirements and can not be netted by novation against other contracts with the same counterparty. As of June 30, 1993, for example, commercial banks reported approximately $1.95 trillion of such contracts on call report

schedule RC-R. This implies a total credit equivalent exposure for interest rate contracts of $65.3 billion + (.5% * $1,950 billion) = $75.1 billion.

For foreign exchange contracts, the potential credit exposure excludes contracts with an original maturity of less than 14 days, exchange traded contracts with a daily margin requirement, and contracts that can be netted by novation. The notional amount of the contracts not meeting any of those exemptions is multiplied by 1.0% for those with a remaining maturity under one year and by 5.0% for those with a remaining maturity over one year. This implies a total credit equivalent exposure for foreign exchange contracts as of June 30, 1993, based on data in call report schedule RC-R, of $90.1 billion + (1.0% * $3,057 billion) + (5.0% * $330 billion) = $137.2 billion.

(b) **In general, to what extent, and in what areas, do you think regulators should rely on internal controls versus regulatory requirements?**

As stated in response to Question #5(b), the OCC has concerns about imposing inflexible rules upon the financial derivatives transactions of U.S. banks. The financial derivatives "market" is a fast-growing, innovative and global market, the growth of which is directly related to recent fluctuations in interest rates, currency rates, and commodity prices and the demand by banks and bank customers for customized financial tools which will allow them to manage, if not reduce, the risks to which they are exposed. Unnecessary regulation, depending upon its form, has the potential to (i) deprive U.S. institutions (both financial and otherwise) of an enhanced ability to manage risk, (ii) restrict the flexibility of U.S. banks to be innovative and creative in developing risk management products that meet the constantly changing needs of their clients, (iii) deprive U.S. banks of a significant and legitimate source of revenue, and (iv) weaken the competitive position of U.S. banks vis-a-vis their foreign counterparts and other U.S. financial institutions.

Most of the OCC's primary regulatory concerns with respect to the financial derivatives activities of U.S. banks (as outlined in the response to Question #5(a)) are best addressed by the implementation of senior management and Board of Directors oversight, proper risk management systems, experienced and qualified personnel in trading and support units, and careful consideration of legal issues and appropriate documentation. These procedures are best implemented by appropriate internal controls. However, the effectiveness of the OCC's examination function to "encourage" the development and application of such internal controls should not be understated. The examination process is one of the more powerful tools available to the OCC to address such issues.

Capital, accounting and disclosure issues are best addressed by regulatory requirements, and there are currently joint (international and domestic) financial supervisory efforts underway to establish such requirements.

(c) **Do you feel that any of the "Recommendations for Dealers and End-Users" contained in the Group of Thirty report (Recommendation 1-20) should be formally mandated by regulation? Please comment on the different issues addressed in the recommendations with specificity.**

The OCC does not believe that any of Recommendations 1 through 20 of the Group of Thirty (the G30) report need to be formally mandated by regulation at this time. Contacts with numerous market participants lead the OCC to believe that participants in the financial derivatives "market" will exert a certain amount of discipline on other participants to meet the G30 recommendations. The OCC is also aware that most, if not all, of the dealers of financial derivatives products are conducting internal reviews to ascertain current and anticipated future compliance with the G30's recommendations. In addition, the International Swap and Derivatives Association (ISDA) has announced a series of conferences to educate market participants about the recommendations and to assist them in complying with the recommendations. ISDA has also announced that it will conduct a survey of market participants a year from now to determine how the market has responded to the challenges posed by the G30 recommendations.

However, the OCC does believe that supervisory guidance, clearly reflecting supervisory expectations with respect to the issues addressed in those recommendations, is appropriate. Such guidance, though avoiding many of the potential problems associated with regulating financial derivatives transactions, will provide a strong incentive to banks to adopt the G30 recommendations and other procedures and systems which the OCC believes are appropriate. When reinforced by a more knowledgeable group of examiners and a strengthened examination process, such guidance should result in the types of procedures, systems, management and oversight appropriate and necessary to effectively engage in, and manage the risks associated with, derivative transactions.

(9) Please comment on the four "Recommendations for Legislators, Regulators, and Supervisors" contained in the July 1993 Group of Thirty report (Recommendations 21-24) as they are relevant to your agency. Please comment on each recommendation separately.

Recommendation 21 recommends that regulators and supervisors recognize the benefits of netting arrangements to the full extent that they are legally enforceable, and to reflect these arrangements in capital adequacy standards. The OCC believes that properly structured netting arrangements have substantial benefits not only for the parties to such arrangements, but to the financial system as a whole. Such benefits include the reduction in counterparty credit risk, the ability to increase profitable businesses within existing credit limits, and the reduction of settlement risk within the financial system as a result of the reduced volume and amounts of payments over large-dollar wire transfer systems. The OCC strongly encourages the use by national banks of legally enforceable netting arrangements with respect to their financial derivatives transactions.

In order to broaden the individual and systemic benefits to be achieved by netting arrangements, the OCC recently supported the FRB's proposal to expand the definition of the term "financial

institution" in FDICIA to include affiliates of otherwise regulated entities. Sections 401-407 of FDICIA provide for the enforceability of "netting contracts" (as that term is defined therein) by "financial institutions".

In addition, as discussed above in response to Question #2, the OCC anticipates issuing a notice of proposed rulemaking on the Basle Committee proposal on netting by the end of this year.

The OCC also believes that G30 Recommendation 22, which recommends the elimination of legal and regulatory uncertainties is also a sound proposal. In general, the OCC will lend its support to any legislative initiative with respect to banks or financial derivatives transactions participants which will alleviate these concerns. However, much of the work with respect to the five issues specifically addressed in Recommendation 22 must be undertaken by legislators, non-bank U.S. supervisors and regulators, and foreign financial institutions supervisors and regulators.

Recommendation 23 encourages legislators and tax authorities to review and, where appropriate, amend tax laws and regulations that disadvantage the use of derivatives in risk management strategies. This recommendation is inapplicable to the OCC; however, we support its goals.

Recommendation 24 states that accounting standards-setting boards should "provide comprehensive guidance on accounting and reporting of transactions in financial instruments, including derivatives, and should work towards international harmonization of standards on this subject." Though this recommendation is also inapplicable to the OCC, we concur with it. Specifically, the OCC is concerned that national banks may be affected by inconsistent derivatives accounting standards when evaluating the off-balance sheet exposures of counterparties to financial derivatives transactions. U.S. banks may also suffer from a lack of a level playing field.

The OCC has always encouraged standardized reporting of financial derivatives transactions. Among other activities, the OCC's support has taken place through:

(i) joint agency review of derivatives through the Federal Financial Institutions Examination Council;

(ii) participation by the OCC's Chief Accountant on the FASB's Financial Instruments Task Force which is addressing derivatives and other financial instruments;

(iii) participation in the various Basle Committee efforts which are all aimed at the goal of establishing international equivalence of certain rules under which banks operate; and,

(iv) monitoring and responding, when considered appropriate, to proposed accounting standards of the International Accounting Standards Committee.

(10) **If the July 1993 Group of Thirty "Recommendations for Dealers and End-Users" (Recommendations 1-20) are not implemented by regulation, are there adequate mechanisms in place to ensure that such recommendations will be self-implemented? Concern has arisen regarding whether or not one can depend solely on the forces of managerial responsibility and market discipline as sufficient incentives to motivate firms to incur the implementation costs of the recommendations. Does your agency believe that mechanisms, such as periodic surveys of industry practice, a timetable for implementation, or a monitor of such actions are warranted?**

Please see the responses to Questions #5(a), #8(b) and (c) above.

(11) **Please comment on whether institutions should be required to establish separately-capitalized subsidiaries to conduct derivative activities.**

The OCC does not believe that national banks should be required to establish separately capitalized subsidiaries to conduct derivative activities. If proper risk management systems are in place, national banks can effectively manage the risks involved in derivative activities (e.g. credit risk, market risk, liquidity risk, and operational risk) in the bank itself. National banks routinely manage such risks in the course of non-derivative bank operations, including traditional extensions of credit.

All banks engaging in derivatives activities already face several powerful constraints that encourage risk management. The derivatives markets exert pressure on participants to be highly creditworthy, either by maintaining high credit ratings or by dedicating high-quality collateral to each transaction. The depositor preference provisions of the Omnibus Budget Reconciliation Act of 1993 gives further incentive to bank participants in derivatives markets to be creditworthy (i.e., because the Act subordinates all the bank's creditors to the deposit insurance fund in the event of a bank failure, market participants are likely to enter into transactions with a bank counterparty only where the threat of the bank's failure is minimal). As described in response to Question #17, OCC policies require banks to have limits regarding collateral for derivatives transactions, in order to protect the liquidity of the bank. In addition, the OCC requires banks to have strong policies and procedures to measure, monitor, and control their risks associated with the derivative activities.

Requiring banks to establish separately capitalized subsidiaries to conduct derivative activities would impose costs that could be high enough to prevent certain banks, particularly small end-user banks, from engaging in derivatives activities that would enable them to enhance their safety and soundness by more effectively managing their risk.

(12) Do you believe the netting provisions contained in the Bankruptcy Code, FIRREA, and FDICIA should be conformed to a single standard? Do the netting provisions in these statutes adequately cover all situations? If not, what situations do and don't they cover?

The enactment of FIRREA and FDICIA and the 1990 amendments to the Bankruptcy Code have brought near certainty on the issue of the enforceability of bilateral close-out netting arrangements with respect to various derivative instruments in the insolvency proceedings of U.S. counterparties. The provisions of FIRREA established, among other things, the enforceability of the netting provisions of master agreements with respect to "qualified financial contracts" (as that term is broadly defined) in the insolvency proceedings of an insured depository institution. Subsequently, the 1990 amendments to the U.S. Bankruptcy Code extended to "swap agreements" (also broadly defined) the protections of avoidance of (i) "cherry-picking" by a trustee in bankruptcy and (ii) the "automatic stay" upon the filing of a petition in bankruptcy, both of which had previously been afforded to forward contracts. Finally, sections 401-407 of FDICIA validated the netting of bilateral and multilateral payment obligations by and among "financial institutions" (as that term is defined therein and by regulation of the FRB) pursuant to a netting contract.

Notwithstanding the above-referenced changes, various commentators have noted that some uncertainty with respect to enforceability issues exist.[3] This uncertainty exists primarily with respect to transactions that are not enumerated within the definition of "swap agreement" for purposes of the Bankruptcy Code and FIRREA (such as spot foreign exchange agreements and equity derivatives),[4] and for which the netting provisions of FDICIA are not applicable.[5] Unlike FDICIA, where the definition of "netting contract" is not tied to any particular transactions, the definitions of "swap contract" under FIRREA and the Bankruptcy Code are tied to a set of enumerated transactions and "any other similar agreement." While one could argue that transactions such as spot foreign exchange contracts and equity derivatives are "other similar agreements" for purposes of the definition of "swap agreement" under FIRREA and the Bankruptcy Code, it is not certain that such an argument would prevail in court.[6] It should be noted, however, that at least one law firm has concluded that if such transactions are not considered "swap agreements," then they would be considered either "forward contracts," or

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[3] See, e.g., Cravath, Swaine & Moore, "Enforceability Survey – United States," Derivatives: Practices and Principles – Appendix II: Legal Enforceability: Survey of Nine Jurisdictions, pp. 291-313, published by the Group of Thirty, Washington, D.C. (July 1993) (the "The Group of Thirty Survey"), and Grosshandler, "Insolvent Counterparties: Too Hot Too Handle – United States," International Financial Law Review, pp. 22-23 (October 1992).

[4] See 11 U.S.C. § 101(55) and 12 U.S.C. § 1821(e)(8)(D)(vi), respectively.

[5] Such as, for example, where one or both of the counterparties are not "financial institutions."

[6] Group of Thirty Survey at p. 304.

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"securities contracts", which are provided with treatment similar to that of "swap agreements" under FIRREA and the Bankruptcy Code.[7]

The uncertainty that arises with respect to the definition of "swap agreement" increases where transactions that qualify as a swap agreement are documented under a single master agreement with transactions that do not qualify as swap agreements. As one legal commentator has noted:

> Sections 362(a)(7) and 553 of the U.S. Bankruptcy Code . . . could delay the ability of a party to net across product types once . . . final net amounts owed by or to a counterparty are reached for the swap agreements, forward contracts and securities contracts documented under a master agreement since those Sections stay the set-off of mutual debts after the commencement of a bankruptcy case, and there is no applicable exception to the automatic stay that would allow the set-off against each other of amounts owed under these three types of transactions. . . .
>
> If a derivatives dealer reaches the point where it has determined that three net amounts are owed by or to a counterparty and that the operation of the automatic stay is delaying further set-off, then uncertainty exists whether a master agreement under which swap agreements, forward contracts and securities contracts are documented should be treated as one agreement so that a court would give effect to the close-out termination provisions of such master agreement to reach one net number either owed to or by the nonbankrupt party.[8]

Similarly, under FIRREA, a dealer may face the risk of selective repudiation among separate qualified financial contracts, if it does not persuade a receiver or conservator that all transactions under a master agreement are "swap agreements."[9] This risk may be diminished, however, if the master agreement contains a provision that provides a basis for terminating all transactions under the master agreement if there is an attempt to repudiate any of the transactions documented thereunder.[10]

Based on the uncertainty that remains with respect to netting arrangements, notwithstanding the improvements made by FIRREA, FDICIA and the 1990 amendments to the Bankruptcy Code.

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[7] Id.

[8] Id.

[9] Id. at p. 305.

[10] Id.

the OCC believes it would be useful for Congress to conform these various netting standards to a single standard. Such legislation should confirm that parties to a master agreement may close-out and promptly terminate a master agreement under which not only "swap agreements" but also "securities contracts," "forward contracts" and similar agreements are documented. Such legislation would be consistent with Congress' most recent legislation on netting in FDICIA which did not tie the validation of "netting contracts" to any particular type of transaction.

(13) Recommendations contained in the July 1993 Group of Thirty Report (Recommendation 20) and elsewhere state that until harmonized accounting and disclosure standards are set, certain disclosures should be made by dealers and end-users. Although a disclosure regarding credit risk is recommended, a similar disclosure for market risk is not mentioned. Should a summary measure of market-risk exposure be disclosed? If so, what form should such a measure take?

The OCC believes that Recommendation 20 of the G30 study provides excellent suggestions for improving the quality of financial statement disclosures concerning derivatives. However, one of those suggestions requires further explanation.

Recommendation 20 calls for the disclosure of the analysis of the credit risk inherent in a bank's derivatives transactions. Such analyses usually determine a "loan equivalency measure" of credit exposure, which is meant to be an equivalent of on-balance sheet exposure for the off-balance sheet risk created by a financial derivatives transaction. For example, the loan equivalent amount for an interest rate swap is typically expressed as the replacement cost of the swap plus an "add-on" which is a measure of the future credit risk that would be caused by interest rate changes. As a result, the loan equivalency measure inextricably links credit risk and market risk.

The OCC believes that disclosure of loan equivalency amounts would provide useful information about the credit and market risks associated with derivatives transactions, and is reviewing this matter.

In addition, disclosure of the market value of out-of-the-money contracts would supplement replacement cost information (i.e., the in-the-money value of contracts) about market risk, and we are also reviewing that issue.

(14) Please comment on the notion of establishing a clearinghouse mechanism for swap transactions. How would a clearinghouse offset separately effect dealers and end-users. Would either benefit more than the other?

The OCC is not aware of any established clearing systems currently operating in the United States for the clearing of derivatives transactions other than those which are traded on organized futures and options exchanges. However, a number of such facilities are currently in the planning stages for over-the-counter products. The common feature of a clearinghouse

arrangement is the multilateral netting of contracts which originate with any of a group of counterparties that participate in the clearinghouse, as opposed to contracts between two constant parties as in bilateral netting arrangements.

Under a multilateral netting arrangement, the clearinghouse is designated as the common legal counterparty for each participant in the arrangement. The reductions in credit and liquidity exposures resulting from a well-designed clearinghouse arrangement can be substantial and generally, the OCC believes that the development of such arrangements is desirable. Indeed, sections 401 - 407 of FDICIA, which were enacted to reduce systemic risk within the banking system and financial markets, validate the netting of multilateral payment obligations by and among "financial institutions" through a clearing organization.

As noted in the Lamfalussy Report, however, multilateral netting systems involving clearing organizations have the potential to increase systemic risks because they concentrate risks on the clearinghouse. If a multilateral netting system is unable to manage and contain prudently its exposures to the participants, the system's operation may increase the likelihood that the credit or liquidity problems of one market participant will suddenly and negatively affect the condition of the other participants. Moreover, the concentration of risks on the clearinghouse exposes all participants to the risk that the clearinghouse itself may fail. See The Lamfalussy Report, Part B, Section 2.28, p. 17. Indeed, the OCC is aware that facilities have been proposed that would arguably increase the credit risk of a participant in the system by imposing liability for the losses arising out of defaulted transactions on non-defaulting participants.

In order to provide the highest level of certainty with respect to (i) the enforceability of the obligations of the participants, (ii) the ability of the clearinghouse to exercise freely and promptly the right of set-off with respect to any property deposited with the clearinghouse by a defaulting participant as security for its obligations, (iii) limitations on the obligations of non-defaulting participants to cover losses arising out of defaulted transactions, and (iv) the financial integrity of the system as a whole, the OCC believes that national banks should only participate in those clearinghouse arrangements that meet the six minimum standards for netting and settlement schemes set forth in Part C to the Lamfalussy Report.

The OCC believes that a well-designed clearinghouse arrangement would provide benefits to both dealers and end-users. Both can benefit from the reductions in credit and liquidity exposures resulting from such a clearinghouse. End-users, however, may derive more benefit than dealers from the substitution of the clearinghouse's creditworthiness for that of individual counterparties, as end-users may not be as adept as dealers at analyzing the credit risks of counterparties. On the other hand, dealers may derive more benefit than end-users from the benefits of multilateral netting. Dealers may also derive competitive benefits from a clearinghouse arrangement to the extent that participation in the clearinghouse masks the dealer's portfolio position.

The primary disadvantage to a clearinghouse arrangement is the shared liability assumed by a participant in the event of another participant's default. The OCC believes that assumption of such liability is inappropriate for national banks. Accordingly, the OCC has required that

national banks acquiring memberships in clearinghouses for futures and options exchanges do so through separately incorporated subsidiaries.

(15) Are there adequate mechanisms currently in place to protect unsophisticated end-users of derivative products? If not, what are your recommendations?

The OCC is concerned that end-users of financial derivatives products have the sophistication to understand the complexities of the transactions they engage in and the necessary systems and procedures to monitor appropriately the risks incurred in connection with those transactions.

Exchange-Traded Derivatives

With respect to transactions in exchange-traded futures and options, which are regulated by the Commodity Futures Trading Commission pursuant to the Commodity Exchange Act, as amended, futures commission merchants are required to deliver to their customers risk disclosure statements with respect to futures and, where applicable, options. These disclosures appear to provide adequate information concerning the risks inherent in these markets.

Over-The-Counter Derivatives

The OCC believes that end-users of OTC financial derivative products should probably have a higher level of knowledge and a greater understanding of the risks inherent in such products. This understanding can be achieved by education of the end-user and ethical sales practices by the selling firm. The securities firm or financial institution marketing a derivative product to an end-user should exercise caution in assessing the appropriateness of that product for the risk management needs of the end-user. This requires that sales personnel are sufficiently educated in the risk/return trade-offs of various derivative products, so as to recognize when a particular product may not meet the risk management needs of the client.

Despite diligent efforts by sales personnel to provide an appropriate risk management tool to a given customer, there will be instances where a customer wishes to engage in a derivative transaction which bank management believes inconsistent with the customer's stated objectives. In those instances, the bank should document that the inconsistencies were discussed with the customer and that the transaction was the customer's decision.

We believe that the following actions would improve the mechanisms used to protect end-users in OTC transactions:

(a) Regulators of securities firms and financial institutions marketing derivative products should insist upon high ethical standards in the sales practices of derivative units. In this respect, proper due diligence in evaluating the appropriateness of a derivative product for a prospective customer is the best safe-guard for both the dealer and end-user. The OCC

intends to issue guidance both to banks and to its examiners which will specifically address this issue within the next few months.

(b) Market participants should encourage any actions which serve to improve the understanding of derivatives by potential end-users. Industry surveys, studies, seminars, etc. (such as those recently released by the G30) are beneficial. Such information also facilitates a better understanding of the effectiveness of derivatives in managing financial risks incurred by financial institutions and other corporate entities.

(c) Market leaders should continue efforts to develop standardized legal documentation for derivative transactions. As documentation becomes standardized, it will be easier for end-users to assess the risk/reward trade-offs of proposed derivative transactions.

(16) What kind of stress test simulations do you recommend to account for the different types of risk which arise as a result of financial derivative activity?

Market Risk

In general, the OCC expects bank dealers of derivative products to regularly perform scenario analyses to determine the effect of various market environments, including those that would be least favorable, on the market value of their portfolios. Banks should recognize that under abnormal market conditions, assumptions that are valid in normal markets no longer hold. It is important for banks to be prepared for such conditions by performing simulations under which normal assumptions (e.g., regarding the correlations between market rates, prices, and their associated volatilities, etc.) no longer apply. Banks should be aware of how their portfolios would perform if they were subjected to abnormally large market swings or to a prolonged period of market inactivity (e.g., scenarios that have a 2 to 5 percent probability of occurring, as predicted by the bank's model). Banks should evaluate the results of such stress tests on a regular basis and develop contingency plans accordingly.

An institution using derivative instruments should estimate the market value of its derivative positions under alternative assumptions about future prices. Institutions should also be able to estimate the interaction between the market values of their derivative positions and the market value of their other activities, both on-balance sheet and off-balance sheet.

Those institutions accounting for their derivatives positions on an accrual basis (primarily end-users) should include those positions in the interest rate simulation exercises they conduct for purposes of asset-liability management.

Liquidity Risk

Banks should be able to estimate their cash flow needs and collateral usage under a range of market conditions, including a series of scenarios in which the credit quality of the bank itself

declines, the credit quality of specific major counterparties decline, and when there is an overall disruption in market liquidity. Banks should also periodically estimate the impact of early termination and collateral provisions in their agreements governing derivative transactions, especially when dealing with credit-sensitive customers. The bank's overall contingency funding plan should reflect those estimates, and banks should be prepared to address funding requirements that would arise in these scenarios.

Credit Risk

Although the OCC does not require banks to conduct formal "stress testing" to determine potential losses due to credit risk, we expect institutions engaging in a significant volume of derivatives transactions to use probability-based analyses to measure the potential risk that may result from the defaults of their counterparties for a variety of potential market environments.

(17) **Please comment on your agency's views of the proper use and level of collateral in derivative transactions.**

The use of collateral in derivatives transactions is increasing. We expect this trend to continue as market participants strive to limit their credit exposures and to manage their counterparty credit lines more efficiently.

The OCC believes that the prudent use of collateral arrangements will add to stability in these markets by limiting credit exposures. Increased use of collateral arrangements should also improve market liquidity because such arrangements would enable more participants to access these markets.

As a matter of long-standing policy, the OCC has discouraged banks from entering into arrangements where only the bank is required to post collateral or where initial margins are determined independently of actual market risk. In addition, the OCC has discouraged banks from encumbering significant amounts of their highest quality, and most liquid, assets.

Acceptable collateral arrangements require both parties to establish maintenance margin accounts. Initial margins should not be required unless they are based upon actual market risk. The formulas used to trigger collateral movement should be periodically reviewed to ensure that they do not require more collateral to be pledged than is justified by market exposure.

Banks engaging in collateralized transactions need to formally consider the impact of encumbering their assets. Accordingly, bank managers should ensure that sufficient amounts of other liquidity sources would be available to meet funding needs in stable as well as deteriorating scenarios. (Please see the response above to Question #16.)

(18) When assessing a counterparty for credit risk, how much relative emphasis should be placed upon factors such as capital, disclosure and credit rating? For example, should a credit rating be a proxy for capital?

When assessing a counterparty for credit risk, a bank should rely on its own analysis of the counterparty's financial strength, management talent, reputation and operational capability. Credit ratings provided by nationally recognized credit rating services should be a consideration in performing such analysis and are useful in establishing a uniform basis of comparing counterparties' relative financial strength for purposes of price and term negotiations.

(19) Are executive decisions regarding derivatives, on average, concentrated in too few individuals in each institution to catch problems in a timely manner? Should the decision-making process, where derivatives are involved, be decentralized to enhance internal controls?

Executive decisions regarding derivatives are, on average, reviewed by a sufficiently large number of bank officers to identify and address appropriately significant risk issues in a timely manner. Policies governing risk levels, management information systems, and internal control mechanisms are, on average, sufficient to facilitate timely action by these executives.

Committees comprising a varied group of senior bank executives and members of the directorate are responsible for reviewing and approving the policies under which line officers execute and manage derivative activities. Chief among these policies are maximum tolerances for the aggregate amount of permissible risk-taking.

Risk positions and changes in the overall risk profile of an institution are, on average, reasonably and regularly communicated to senior and executive level management. At most banks with significant derivatives activities, reports summarizing market and credit exposures from current positions and trends are routinely provided to the Board.

In addition to senior management oversight, derivatives used by banks for risk management purposes, as well as trading activities, are regularly reviewed by a number of functional units which are independent of the trading areas. These include credit administration and review units, asset/liability management and market risk committees, and internal audit and compliance units. The organizational structure of these functions is generally designed to provide a control mechanism to help ensure that risk-taking activities are in compliance with established policies.

Many banks with large derivatives portfolios also have, or are in the process of establishing, independent market risk management units. These units function similarly to credit risk management units: They provide executive management and the directorate with independent assessments of risk positions, trends, valuations, adequacy of controls, and other issues that may be of current importance.

Through the examination process, the OCC encourages executive managers and members of the directorate to familiarize themselves with derivative products on a continuous basis. The OCC expects this to be accomplished by the increased use of in-house educational programs, and by the addition of highly-skilled professionals to management teams and Board committees.

(20) **Do compensation policies currently in place adequately discourage undue risk-taking? For example, if employees benefit financially from risk-taking in a direct manner, how is such risk taking controlled?**

Currently, most banks that trade derivatives products, or that make markets in derivatives transactions, use the types of "bonus pool" incentive compensation arrangements that are commonly used by investment banks. Under such arrangements, a percentage of the profits attributable to derivative transactions are paid into a "bonus pool" which is distributed to eligible employees in a manner that is determined by management's discretion.

Management controls ensure that the amounts paid into a bonus pool are actually profits and are recognized only after adequate expense provisions have been made to cover the long-term operational, capital, and other support costs associated with the derivatives trading operation. Managerial controls over derivatives markets risk-taking also involve the usual types of trading risk limits and sub-limits, independent valuation of positions, and management action triggers. A blending of these two aspects of management controls is necessary to ensure that a profit-based compensation system does not motivate derivative traders to engage in uncontrolled risk-taking.

For the most part, banks have been successful in controlling the risks of undue risk-taking associated with profit-based employee incentive compensation systems. However, over the last few years, a few banks have either experienced substantial financial losses or suffered a loss in reputation, market standing and investor confidence in connection with their trading of a variety of financial instruments, including financial derivatives. The causes of these losses have been varied, including improper valuation of market positions, trading in excess of established internal risk limits, and weak and inefficient controls and operational support. (The Federal Reserve Bank of New York noted these problems in a letter sent by Chester B. Feldberg, Executive Vice President, to the chief executive officers of all banking organizations in the Second Federal Reserve District on March 20, 1992, a copy of which is attached as Appendix 17.) However, in some cases, it appears that trader misconduct (and, in some cases, fraud), possibly motivated by the possibility of increased compensation, may have played a substantial part in the banks' problems. These occurrences confirm that importance of robust risk management systems and controls and meaningful oversight and scrutiny of all trading activities by senior management and the Board of Directors.

(21) What is the level of systemic risk resulting from derivatives activities? Do you agree with those who assert that derivatives activities are concentrated in too few institutions?

A number of concerns have been raised about the use of derivatives. For the most part, those concerns have focused on the difficulty of assessing the various risks associated with derivative products. Many of these concerns, however, overlook a subtle problem regarding the nature of derivative transactions. In particular, derivative risks will depend upon a number of factors, including changes in market rates and prices, counterparty performance, market liquidity conditions, and the performance of payment systems. The "problem" is that most of the techniques used by some of the newer market participants to evaluate derivatives' risks do not incorporate all of those factors, and more importantly, few if any institutions use evaluation techniques that formally recognize the interdependencies among those factors.

If banks are going to be in the derivatives business, they should be able to analyze not only the separate, traditional types of risk -- credit, market, liquidity, operational and so on -- but also the risk that arises from the possibility of unforeseen convergences of these traditional types of risk, new convergences that derivatives bring about. We believe that the largest participants -- the ones with by far the most experience with derivatives -- have already made an effort to do such analysis, but the smaller, newer participants are where our concerns focus. While there has always been linkage among the traditional types of risk, linkage that bankers may or may not have understood intuitively or otherwise, the process of creating derivatives -- the slicing and dicing and recombining -- make it harder to evaluate what new risk combinations are formed. This covariance among various types of risks poses a subtle form of systemic risk. Banks need to put together systems that will allow them to uncover those new risk combinations -- in other words, to expect the unexpected. The OCC expects each bank to adopt and have in place a "no surprises" risk management policy.

To use an example, in a volatile rate environment, the market risk on some types of derivatives contracts could increase. But, the increased volatility might also make some market participants uneasy about entering the market for those contracts, reducing market liquidity and thus increasing the time needed to enter the market or unwind unfavorable transactions. Generally speaking, it is reasonable to imagine circumstances in which some "common event" occurs that simultaneously exposes a large number of market participants to higher risk of one type (e.g., market, credit, or liquidity, etc.), and the higher exposures for those participants creates still higher exposures for many of the same, as well as other, market participants. For example, a computer failure of a major clearinghouse would increase settlement risk for a larger number of institutions, which could then weaken the credit quality of some of those institutions and thus increase the credit risk for the counterparties of those institutions.

Nearly everyone acknowledges that "significant" common events themselves pose systemic risk, but a subtle feature of the system today is that less significant common events may also pose systemic risk due to the potential for risk-linkages that are exceedingly difficult to identify in derivatives markets because of the inherent complexities associated with derivatives. The OCC must ensure that national banks engaging in derivatives transactions, either as dealers or as end-

users, have the ability to accurately assess the risks associated with financial derivatives activities and have sound risk management systems. In this way, banks can be expected to protect themselves against large losses resulting from counterparty failures or from adverse movements in market rates.

Finally, some have argued that because only a small number of U.S. commercial banks engage in derivatives activities, those banks would be able to extract extra-normal profits from derivatives transactions, to the detriment of their customers. However, such arguments neglect to account for the large number of foreign bank and non-bank financial institutions that also participate in derivatives markets. As a consequence, it is unlikely derivatives market participants are disadvantaged by the aforementioned concentration of derivatives activities.

(22) **Cash liquidity risk for a firm appears to be of greater concern the greater is a firm's involvement in derivative activities, the greater is its reliance on short-term funding, the lower is its credit standing, and the more restricted is its access to central bank discount or borrowing facilities. Therefore, in contrast to depository institutions who, among other things, have access to the discount window, securities firms may find cash management requirements, such as maintaining margin requirements, arising from large derivatives portfolios to be more challenging. Compared to depository institutions, how does the less liquid nature of the securities business affect its derivatives activities and the risks associated with such activities?**

Securities firms generally have liquid asset bases which help them to meet unanticipated funding needs without posing significant threats to their solvency. That is, the bid-ask spread on those assets is narrow, allowing asset sales to occur close to fair market values, which protects the firm's solvency.

Alternatively, bank assets are predominately composed of illiquid loan portfolios. As a result, bid-ask spreads on assets can be quite large so that if a bank must meet an unanticipated funding need it may be forced to sell assets at "fire sale" prices, which can be far below fair market values. Recognizing that such an event could force a bank into insolvency, the FRB can make funds temporarily available to avoid these liquidity short falls.

Although the comparative advantages of managing liquidity risk with liquid assets (without discount window availability) versus managing such risk with illiquid assets (with discount window availability) are subject to differing views, it is clear that financial derivatives pose new difficulties for liquidity management regardless of what type of institution is using them.

Financial derivative instruments pose new risks to bank liquidity in two ways. First, it is often difficult to assess future cash flow patterns for derivatives, which can make it difficult for a bank to control the amount and timing of future payments and receipts. In general, such assessments typically require a high degree of mathematical sophistication (e.g., simulation analysis) and frequent updates to reflect changes in market conditions. Consequently, if a bank misjudges its

future derivatives-related payment obligations, it will affect its ability to accurately assess its future net funding requirements. Second, financial derivatives can be used to create complex webs of direct and indirect claims that can spread across many different markets (i.e., so called "multi-legged" transactions). In such instances, systemic instability may be exacerbated if market participants become uneasy about their own business relationships when unrelated market disruptions occur. This might reduce a bank's ability to purchase funds, or sell assets, when needed.

Financial derivatives dealers and end-users, and financial institution regulators have increased their level of awareness of the risks posed by derivatives. As a result, market discipline and regulatory actions have limited the involvement of financially troubled institutions in derivatives markets. For example, counterparties routinely reduce credit exposures to weakening institutions by reducing the volume and maturity of transactions and by using collateral and margining agreements. Some institutions have sought to create highly-rated special purpose vehicles as an alternative means of entering, or maintaining a presence in, financial derivatives markets. In addition, bilateral and multilateral netting arrangements are being developed by market participants in conjunction with financial regulators. These arrangements are useful because they can reduce credit exposures of derivatives transactions.

Effective liquidity management ensures that funds are available to accommodate decreases in deposits and the run-off of other liabilities, while at the same time making funds available to support medium- to long-term assets at reasonable prices relative to competitors. While financial derivatives may assist in the achievement of some of those objectives, they may defeat others if liquidity concerns are neglected. Bank managers must recognize that derivatives can require new risk management methodologies, stronger risk controls and better management systems. Management must also continue to review their policies, procedures, and information systems in order to manage and control these constantly changing risks.

(23) **Criticism of speculators in the derivative markets, primarily exchange-traded derivatives such as currency futures and options, has focused on the alleged ability of such speculators to manipulate markets. Concerns have also arisen as to potential depository institution exposure as a result of speculators' activities. Please comment on these criticisms and whether or not such speculators should be subject to increased regulation or supervision.**

The recent well-publicized activities of a few large speculators in the foreign currency markets and, to a lesser extent, in the precious metals markets have occurred primarily in the OTC markets, rather than the exchange-traded markets. (The OTC markets in these products are much larger and more liquid than the exchange traded-markets, especially with respect to transactions with longer maturities.) Large and sophisticated speculators can and do significantly influence the derivatives and other financial markets, as they are usually seeking to profit from real or perceived market pricing inefficiencies and their actions often help bring the various markets into equilibrium. The OCC has not taken a position on whether the activities of such speculators

should be regulated. However, it is important to note that speculators serve an important function in most traded markets - they provide the liquidity necessary to allow financial and other institutions to effectively use such markets for risk management purposes.

In addition, the global nature of the OTC derivatives markets presents a practical impediment to the ability of the U.S. to "regulate" their activities. Any regulation of, or attempt to regulate, such speculators may only drive their trading activities to offshore markets with little overall effect on the market impact of such activities (and a possible loss of revenue for the US financial institutions which trade with such speculators).

Bankers can control their institutions' exposures to speculators through well-conceived and well-maintained controls over credit, market, and liquidity risks. An integral part of the examination process is the evaluation of those controls themselves as well as the evaluation of processes used by bank managers to revalidate the effectiveness of those controls.

(24) What, if any, effect will the depositor preference provision of the Omnibus Budget Reconciliation Act of 1993 have on the derivatives market?

The effects of national deposit preference are not entirely clear. In theory, a significant share of the costs of insured bank failures will be transferred from the FDIC to banks' creditors and counterparties. All else remaining the same, this "risk transfer" will increase banks' "risk premium" on nondeposit funds, raising their total expense of issuing such debt. In derivatives markets, we expect an increase in both the spread and collateralization required of banks. The market might even force some weak banks to unwind their positions.

In practice, however, there are several factors that will tend to reduce the magnitude of the risk transfer. First, depositor preference will increase the risk premiums on nondeposit funds only to the extent that the market believes that a bank might fail. Under current conditions, the market apparently assigns a low probability of failure to most banks, and until that changes, depositor preference should increase risk premiums only slightly.

Second, national depositor preference should, in the long run, reduce losses to the FDIC. That would help reduce deposit-insurance premiums, lowering insured banks' all-in cost of funds. As their cost of deposit funds decline, banks become safer credits, reducing their risk premium on nondeposit funds. This indirect effect will help offset the direct effects of the risk transfer.

Third, it is not entirely clear how completely depositor preference will reorder receivership priority. In practice, negotiation often plays a more important role than legislation in apportioning losses among creditors. Priority in bank and thrift failures had been relatively clear, but several recent changes in legislation, now including national depositor preference, have yet to be tested in the courts.

The difficulty of unraveling all of the effects of depositor preference explains why there is some disagreement among the bond-rating agencies as to its full effects. Moody's Investors Service has created a new rating category, which will apply specifically to domestic banks and thrifts, to reflect depositors' status with regard to receivership priority. Recently, they downgraded the nondeposit liabilities of some banks, though as yet no money-center bank has been downgraded. For the time being, Standard & Poor's has decided not to downgrade any investment-grade banks, taking the view that the debt-servicing ability of high-quality going concerns have not been sufficiently affected by depositor preference to warrant a lower rating.

ATTACHMENT E

The Securities and Exchange Commission Response

THE CHAIRMAN

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

October 27, 1993

The Honorable James A. Leach
Ranking Member
Committee on Banking, Finance and Urban Affairs
United States House of Representatives
2186 Rayburn House Office Building
Washington, D.C. 20515

Dear Congressman Leach:

In response to your letter of August 9, 1993, I have enclosed answers prepared by the Commission's staff that respond to your questions regarding derivatives and their impact on the global financial system.

During recent years, the Commission has been monitoring carefully the proliferation of derivative products, including over-the-counter derivatives, and has been working actively with industry representatives and other regulators in order to better understand what risks these new and complex products pose for U.S. financial markets. While we continue to assess what modifications to the Commission's regulatory structure may be needed to respond to current market developments, we remain committed to maintaining safe and stable markets, while allowing market participants the freedom to respond to customer needs with new and innovative financial products.

Commissioner Beese will be testifying before the Committee on Thursday, October 28. I trust that the enclosed materials and his testimony will respond fully to your questions. Please do not hesitate, however, to let me know if you have any additional questions.

Sincerely,

Arthur Levitt
Chairman

Enclosure

SEC STAFF SUBMISSION
TO THE HONORABLE JAMES A. LEACH
COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS
U.S. HOUSE OF REPRESENTATIVES

CONCERNING FINANCIAL DERIVATIVES

OCTOBER 27, 1993

U. S. Securities and Exchange Commission
450 Fifth Street, N.W.
Washington, D.C. 20549

EXECUTIVE SUMMARY

During recent years, there has been a virtual explosion in the types of financial products being brought to market in this country, including growing activity involving over-the-counter ("OTC") derivatives. Clearly, the growth of this market presents significant new challenges for regulators. The Commission, however, is responding to these challenges -- combining vigorous oversight of our markets with the flexibility that allows new products to develop in response to investor needs.

As the Commission monitors the changes derivative products are bringing to U.S. and global financial markets, it is working actively with industry representatives in order to better understand new and complex products and market practices. While we are confident that there are in place sufficient regulatory controls, such as risk monitoring systems and the net capital requirements for broker-dealers, to safeguard the stability of the U.S. brokerage industry, the introduction into the marketplace of new OTC derivative products carries with it certain legitimate concerns. As a result, the Commission already has begun to evaluate these concerns and is coordinating its efforts with other federal regulatory bodies.

While many OTC derivatives are new, the Commission's experience in regulating derivatives activities is not, beginning with its creation in 1934 when the Congress gave the Commission authority to approve options trading through rulemaking under Section 9 of the Securities Exchange Act of 1934 ("Exchange Act"). Since 1934, the Commission has regulated trading in stock options and other securities-based derivative products. These products include both standardized options, such as those traded on five

national exchanges, and derivatives offered by corporate issuers, such as warrants, rights, and various convertible securities.

Exchange trading of derivative securities began in 1973 when the Commission authorized the listing and trading of standardized options contracts on the Chicago Board Options Exchange. Later, trading was authorized on several other exchanges, including the New York Stock Exchange, the American Stock Exchange, the Philadelphia Stock Exchange, and the Pacific Stock Exchange. The Commission, together with these exchanges and the National Association of Securities Dealers, Inc. ("NASD") (the exchanges and the NASD together being designated "self-regulatory organizations" or "SROs") have created a special regulatory structure for derivative securities. As part of its on-going review of derivatives activities, the Commission produced a special study of the options markets in 1978 that led to further regulatory developments. Currently, this structure of regulation under the Exchange Act has four principal components.

- Rules Against Fraud and Manipulation. The cornerstone of Commission regulation is the maintenance of markets that are free of manipulation and abuse. In this regard, the Commission has specific statutory authority under the antifraud provisions of the federal securities laws to adopt and enforce rules that prohibit market manipulation, insider trading, and abusive securities trading or sales practices.

- Broker-Dealer Regulation. Broker-dealers that conduct any derivatives activity involving securities are required to be registered as broker-dealers with the Commission and to be members of one or more of the SROs. In general, broker-dealers have a duty to provide their customers with best execution of their orders and to make suitability determinations before recommending customer trades. The SROs

also promulgate and enforce rules governing broker-dealer sales practices. Broker-dealers also are subject to Commission rules governing financial responsibility, including the Commission's recordkeeping and reporting rules and net capital requirements.

- Market Regulation. Exchange trading provides certain safeguards, including transparency (in the form of real time quotation and price reporting), margin requirements and position limits, limitations on market concentration, audit trail requirements, and circuit breakers designed to control extreme market shifts. These markets also are subject to surveillance systems that enhance the ability of the SROs to examine and enforce Commission and SRO prohibitions against fraud and manipulation. Systems also have been established to ensure efficient and accurate clearance and settlement of trades, including the settlement and clearance of options transactions effected on a national exchange in a continuous net settlement system operated by the Options Clearing Corporation.

- Special Customer Protection Rules. In options transactions, specifically, broker-dealers are required to follow certain SRO rules governing account opening procedures. Among other things, they are required to exercise due diligence in ascertaining customer suitability for options trading, particularly before recommending options trades or trading strategies, and to provide each customer with a standardized risk disclosure document. SRO rules also impose special qualification and testing requirements for broker-dealer sales personnel and their supervisors who effect options transactions.

We are satisfied that this structure permits the Commission and the SROs to maintain continued oversight of derivatives securities markets, and to monitor further market developments. Current debate, however, is focused on developments involving OTC derivatives, and our responses to questions posed by Congressman Leach address these developments.

The OTC derivatives market has developed primarily as an institutional market, comprised of sophisticated players and privately negotiated, customized derivative contracts. Indeed, the great success of this market results from the products' flexibility. OTC derivatives offer institutions the ability to manage risks that might otherwise make certain investments or economic activities impracticable, and allow them to gain exposure to equity, bond, or mortgage markets around the world without having to liquidate certificates of deposit or Treasury securities.

As noted earlier, the recent expansion in OTC derivatives activities has raised a number of concerns. We are concerned, for example, that as derivative products become more popular, small and less sophisticated institutions will turn increasingly to derivative products as tools to counter the effects of market volatility or to reallocate certain risks, particularly currency risks, associated with portfolio assets. Certain derivative products, such as detachable call options on municipal bonds or collateralized mortgage obligations, are available even to retail investors. Many derivative products, however, may not be suitable for less sophisticated institutional and retail customers. Accordingly, the Commission and the SROs will not hesitate to enforce the antifraud provisions of the federal securities laws and SRO customer protection rules to ensure that broker-dealers refrain from recommending unsuitable products to uninformed investors.

We also are concerned about the potential effects of derivatives activities on U.S. financial markets. For example, substantial OTC derivatives activities are being conducted by unregistered affiliates of U.S. broker-dealers. In order to understand better the scope of these activities and the potential risks, if any, posed to registered broker-dealers by the activities of their affiliates, the Commission adopted risk assessment recordkeeping and reporting rules that provide it with an overview, on a periodic basis, of any material risks to broker-dealers posed by their affiliates.

Under the risk assessment rules, broker-dealers are required to file information concerning the financial and securities activities of affiliates that are likely to have a material impact on the broker-dealer's financial and operational condition, and to provide the Commission with immediate and more detailed information in response to Commission concerns regarding a broker-dealer's financial or operational condition. In addition, broker-dealers are required to make and keep records concerning their policies, procedures, and systems for monitoring and controlling financial and operational risks resulting from the activities of their affiliates. The Commission's staff presently is analyzing quarterly filing information obtained from approximately 250 securities firms.

The Commission also is involved in ongoing discussions with industry representatives regarding appropriate methods for evaluating credit and market risks posed by OTC derivative products. In particular, on May 4, 1993, the Commission issued a concept release requesting comments on the treatment of derivative products under the net capital rule. Among the approaches considered by the Commission in the concept release is the development of capital requirements that comprehensively address credit and market risks so that firms may conduct derivatives activities in registered broker-dealers subject to appropriate capital standards.

Finally, recent experience in the sharp market declines of 1987, 1989, and 1991 has demonstrated how the liquidity of the nation's equity markets may be strained by the sell-off of stocks and futures by derivatives dealers trying to adjust their hedges to accommodate rapidly changing market risks. Experience also has shown that market volatility can be magnified to the extent a few large dealers or investors dominate and are capable of moving a market. The Commission continues to work with industry representatives and other regulators to identify systemic risks to the marketplace, and to evaluate appropriate measures for addressing these risks.

The federal securities laws establish an appropriate regulatory structure for derivative securities activities. At this time, the Commission is monitoring developments in the OTC derivatives markets and will propose modifications to the regulatory structure as they are needed. This approach, it is believed, will permit the Commission to maintain stable markets and protect investors, while allowing market participants the freedom to meet customer needs with new and innovative financial products.

Question 1. To outline your agency's supervision and regulation of derivatives, please summarize and provide the written policies and procedures currently used by your agency to regulate and monitor derivative activities, including documents regarding the Net Capital Rule. Also, please provide a summary of your regulatory authority over derivative transactions.

A. Commission Regulatory Authority.

Derivative instruments encompass a wide array of financial contracts, including swaps, futures, options, and forwards, that derive their value from the performance of other assets, such as equities, debt, foreign currency, and commodities. Whether the Commission has authority over derivative trading activity depends, generally, upon whether the derivative instrument in question is a "security."1/ Transactions in securities are subject to comprehensive regulation under the Exchange Act, including provisions governing broker-dealer sales practices and market trading rules.

While some derivative products, such as options on securities, are securities subject to Commission jurisdiction, others are futures subject to regulation by the Commodities Futures Trading Commission ("CFTC"). Pursuant to Sections 2(a)(1)(A) and 4c(b) of the Commodity Exchange Act ("CEA"), the CFTC has exclusive jurisdiction over the trading of futures and commodity options contracts. By 1982, the proliferation of exchange-traded derivative products had resulted in confusion over the respective

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1/ Section 3(a)(10) of the Securities Exchange Act of 1934 (the "Exchange Act") defines the term security to include any note, stock, treasury stock, bond, debenture, certificate of interest or participation in any profit-sharing agreement, investment contract, certificates of deposit, or any put, call, straddle, option, or privilege on any security, certificate of deposit, or group or index of securities, or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or in general, any instrument commonly known as a "security." The definition of security specifically excludes currency or any note, draft, bill of exchange, or banker's acceptance which has a maturity date at the time of issuance not longer than nine months. Generally, the Exchange Act definition of security is understood to exclude instruments exempt from registration under Section 3(a)(3) of the Securities Act of 1933 by virtue of their classification as commercial paper (See Securities Exchange Act Release No. 4412 (Sept. 20, 1961) [1957-61 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶2045).

jurisdictional boundaries of the Commission and the CFTC. An agreement reached between the Commission and the CFTC was codified by the Congress in 1982.2/ Under the legislation, the CFTC retained exclusive jurisdiction over all futures contracts, including futures contracts on stock indexes,3/ and options on futures contracts and physical commodities and foreign currency (except if traded on a securities exchange).4/ The Commission retained jurisdiction over securities, including options on securities (including exempted securities), options on certificates of deposit, options on stock indexes, and options on foreign currency traded on a national securities exchange.

B. Commission Regulation of Derivatives Activities.

The Commission has in place a securities regulatory structure under the Exchange Act that encompasses derivatives activities within its jurisdiction. This regulatory system is comprised of four essential components.

- Rules Against Fraud and Manipulation. The cornerstone of Commission regulation is the maintenance of markets that are free of manipulation and abuse. In this regard, the Commission has specific statutory authority under the antifraud

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2/ This jurisdictional agreement, commonly referred to as the "Johnson-Shad Accord," was passed into law by the Congress as part of both the Securities Acts Amendments of 1982 and the Futures Trading Act of 1982. See Public Law No. 97-303, 96 Stat. 1409 (1982) and 97-444, 96 Stat. 2294 (1982).

3/ In passing the Johnson-Shad Accord into law, Congress added a provision that provided the Commission with a special consultative and concurrent role in the approval process concerning stock index futures contracts. In particular, the Commission must find that the specific stock index futures contract is cash-settled, not readily susceptible to manipulation, and reflects a substantial segment of the underlying cash market. Futures contracts on individual securities, other than exempted securities, were prohibited.

4/ Although Sections 2(a)(1) and 4c of the Commodity Exchange Act ("CEA") prohibit the trading of futures contracts, options on futures contracts, and physical commodity options other than on designated commodities exchanges, the Futures Trading Practices Act of 1992 (Pub. L. No. 102-546, 106 Stat. 3590) amended the CEA by giving the CFTC the authority to exempt certain hybrid products, swaps, and other derivative products from the CEA. Earlier this year, the CFTC adopted rules exempting swap agreements and certain hybrid securities satisfying specified criteria from regulation under the CEA (17 C.F.R. part 35).

provisions of the federal securities laws to adopt and enforce rules that prohibit market manipulation, insider trading, and abusive securities trading or sales practices.

• Broker-dealer Regulation. In the United States, broker-dealers that conduct any derivatives activity involving securities are required to be registered as broker-dealers with the Commission and to be members of one or more self-regulatory organization ("SRO"), such as the National Association of Securities Dealers, Inc. ("NASD"), the New York Stock Exchange, and the other national exchanges on which derivative securities are traded. The SROs promulgate and enforce rules governing broker-dealer sales practices. Under these rules, broker-dealers have a duty to provide their customers with best execution of their orders, and to make suitability determinations before recommending customer trades.

In addition, all broker-dealers are subject to Commission rules governing financial responsibility that are designed to protect their integrity and financial stability. These rules include the Commission's recordkeeping and reporting rules5/ and the net capital rule.6/ The net capital rule, in particular, plays a significant role in the maintenance of fair and orderly markets in the United States by ensuring that broker-dealers maintain sufficient net, liquid assets that enable them to satisfy promptly their obligations to customers and other broker-dealers. These assets also provide a cushion against potential market and credit risks.

The net capital rule's existing structure was developed in large measure prior to the recent growth and development of the OTC derivatives market. Under the net capital rule, the unrealized profit associated with an OTC derivative, generally, is

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5/ Registered broker-dealers are required to comply with the Commission's financial and operational reporting rules, which require broker-dealers to file monthly, quarterly, and annual financial reports. Commission rules also require broker-dealers to make and preserve certain specified books and records. See 17 C.F.R. §§ 240.17a-3 through 240.17a-5.

6/ 17 C.F.R. § 240.15c3-1.

treated as an unsecured receivable subject to a 100% capital charge. In light of the development of the OTC derivatives market and the trend among dealers to conduct OTC derivatives activities not involving securities in unregistered entities, either here or abroad or in separately-capitalized derivative product companies ("DPCs"), the Commission has commenced a formal review of its capital requirements.

On May 4, 1993, the Commission issued a concept release requesting comments on the treatment of derivative products under the net capital rule (the "Concept Release").7/ Among the approaches considered by the Commission in the Concept Release is the development of capital requirements that comprehensively address the credit and market risks posed by derivative products so that firms may conduct derivatives activities in registered broker-dealers subject to appropriate capital standards.8/

The Commission staff also collects information from registered broker-dealers to enable the staff to further evaluate the risk management systems of broker-dealers, particularly their systems for monitoring counterparty risk. Specifically, pursuant to the Market Reform Act of 1990 (the "Market Reform Act"),9/ the Commission adopted risk assessment recordkeeping and reporting rules 10/ that provide the Commission with an overview, on a periodic basis, of the financial and securities activities of affiliates that are likely to have a material impact on the broker-dealer's financial and operational condition. In addition, broker-dealers are

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7/ Securities Exchange Act Release No. 32256 (May 4, 1993), 58 FR 27486. A copy of the Concept Release is attached as an exhibit.

8/ The treatment of derivative products under the net capital rule is discussed further in response to Question 2.

9/ Pub. L. No. 101-432, 104 Stat. 978.

10/ 17 C.F.R. §§ 240.17h-1T and 240.17h-2T. See Securities Exchange Act Release No. 30929 (July 16, 1992), 57 FR 32159.

required to file with the Commission records concerning their policies, procedures, and systems for monitoring and controlling financial and operational risks resulting from the activities of their affiliates. The Commission also is authorized to obtain more immediate and detailed information in response to Commission concerns regarding a broker-dealer's financial or operational condition. The Commission's staff presently is analyzing quarterly filing information obtained from approximately 250 securities firms.

• Regulation of the Markets. A special regulatory regime has developed for securities that are traded on a national securities exchange. These rules are designed to maintain fair and orderly markets, while facilitating market competition and efficiency. Exchange trading, for instance, provides certain safeguards, including transparency (in the form of real time quotation and price reporting), margin requirements 11/ and position limits, limitations on market concentration, audit trail requirements, and circuit breakers designed to control extreme market shifts. Some OTC markets, such as the NASD's automated quotation system (Nasdaq), provide many of the same protections. These markets also are subject to surveillance systems that enhance the ability of the SROs to examine and enforce Commission and SRO customer protection rules.

Systems also have been established to ensure efficient and accurate clearance and settlement of trades. Options transactions effected on a national exchange are cleared and settled in a continuous net settlement system operated by the Options Clearing Corporation. This system significantly reduces counterparty risk through

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11/ In 1983, the authority to review margins for options on securities was delegated to the Commission by the Board of Governors of the Federal Reserve Board. In 1985, the Commission, in conjunction with the national exchanges on which options are traded and the NASD, established a uniform, premium-based customer margin system for "short" options positions that sets appropriate margin levels consistent with market conditions.

the presence of a financially stable contractual intermediary that interposes itself as the contra party to both sides of any transaction.

Margin requirements further contribute to the maintenance of fair and orderly markets. First, margin serves to prevent investors from entering into highly leveraged positions and incurring obligations which they will be unable to satisfy in the event of a substantial market decline. Secondly, margin protects the capital of broker-dealers and clearing firms by reducing the risk that their capital will be called upon to satisfy the obligations of overly-leveraged investors. Finally, margin also serves to minimize systemic risk to the entire financial system during periods when markets are under stress, and when defaults by otherwise highly-leveraged participants would pull liquidity out of the system at a time when it is under the most stress.

- Special Customer Protection Rules. Broker-dealers effecting transactions in securities that pose special risks to investors, whether such securities are traded on an exchange or in the OTC market, are subject to additional requirements under the federal securities laws, including sales practice requirements intended to protect investors and provide them with information about investment risk. In options transactions, broker-dealers are required to follow certain SRO rules governing account opening procedures. Among other things, they are required to exercise due diligence in ascertaining customer suitability for options trading, particularly before recommending options trades or trading strategies. Broker-dealers also are required, pursuant to Rule 9b-1 under the Exchange Act12/ and Form S-20 under the Securities Act of 1933,13/ to provide options customers with a risk disclosure document containing information describing the mechanics and risks of options trading,

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12/ 17 C.F.R. § 240.9b-1.

13/ 17 C.F.R. § 239.20.

transaction costs, margin requirements, and the tax consequences of margin trading. SRO rules also impose special qualification and testing requirements for broker-dealer sales personnel and their supervisors who effect options transactions.

Question 2. Please discuss in detail capital requirements, both current and proposed, as they relate to derivative activities of institutions regulated by your agency. Do you feel the current capital standards are adequate?

Broker-dealers engaged in derivatives activities involving securities are required to be registered with the Commission and are subject to Commission rules that require, among other things, broker-dealers to maintain certain specified minimum levels of net capital. The primary purpose of the net capital rule is to ensure that broker-dealers maintain sufficient net, liquid assets to enable them to satisfy promptly their liabilities to customers and other broker-dealers, and to provide a cushion of liquid assets in excess of their liabilities to protect against potential market and credit risks.

Net capital is defined as a broker-dealer's net worth computed in accordance with generally accepted accounting principles, plus satisfactory subordinated liabilities, less assets not readily convertible into cash 14/ and most unsecured receivables. The broker-dealer then subtracts prescribed percentages (or haircuts) from the market value of its securities and commodities positions to account for market and credit risk. The rule also requires broker-dealers to mark their securities and commodities positions to market value on a daily basis.

Although the current net capital rule contains treatment for derivative products transactions, much of the rule's current structure was developed prior to the recent growth and development of the OTC derivatives market. The Commission, therefore, is considering different approaches to the treatment of derivative products under the net capital rule in order to evaluate whether the net capital rule should be modified in light of developments in the derivatives markets, generally, and the OTC market in particular. These approaches are discussed in the Concept Release.

14/ Assets not readily convertible into cash include goodwill, furniture and fixtures, buildings, prepaid expenses, and exchange seats. 17 C.F.R. § 240.15c3-1(c)(2)(iv).

One approach under consideration would involve maintaining the current net capital rule. Another approach would be to devise capital requirements that comprehensively address the credit and market risks posed by derivative products so that firms could conduct their derivatives activities in registered broker-dealers without what they often regard as undue capital constraints. A third approach, which could be combined with either of the first two approaches or implemented separately, would be to formulate separate capital guidelines that specifically would apply to DPCs that are registered broker-dealers.

The current treatment of various derivative products under the net capital rule is summarized below, together with alternative approaches presented in the Concept Release.

A. Market Risk.

The following is a summary of the current capital charges required in order to account for the market risks associated with various derivative products.

1. Standardized Options. Currently, the net capital rule provides for two different capital treatments for standardized options positions held by broker-dealers. The first approach assumes that options will be exercised or held to expiration. Therefore, capital charges are based on the market value of the underlying security. The second approach assumes that options will be traded and, therefore, capital charges are based on the market value of the option rather than the underlying security. Both approaches generally assess minimum charges for naked, or uncovered, option positions or recognized option strategies.

The Commission staff is studying a recommendation that the Commission adopt a theoretical pricing model system developed by the Options Clearing Corporation to determine haircuts for broker-dealers' standardized options positions under the net capital rule. The proposal under consideration would require broker-dealers to take a capital charge on a portfolio of options on a given underlying instrument equal to the difference between the closing market prices and the options' theoretical prices after applying assumed market

movements of the underlying and after netting theoretical profits and losses on those positions.

2. OTC Options. Long positions in OTC options generally are treated conservatively under the net capital rule because of the attendant credit risk and their very limited liquidity. This conservative treatment requires broker-dealers to deduct the full time value premium15/ of OTC options from their net worth. In addition, broker-dealers are required to apply a haircut on the option's intrinsic value. Moreover, as a general rule, no preferential hedging or spread benefits are allowed for long OTC options. The Concept Release requested comments on whether a pricing model for determining haircuts, similar to that being considered for standardized options, could be used for OTC options.

3. Futures Contracts and Options on Futures Contracts. Generally, capital charges for futures contracts and options on futures contracts are based on the margin requirement of the applicable commodity clearing organization. If these instruments are hedged by securities products, capital charges generally are determined by the net capital rule and the interpretations thereunder. The staff understands that most trading in futures contracts and options on futures contracts, where the underlying instrument is a security, is governed by the net capital rule. The Concept Release did not propose any change to the capital treatment of futures contracts and options on futures contracts under the net capital rule.

4. Forward Contracts. Currently, the net capital rule assesses a capital charge on forward contracts in currency, commodities, and U.S. government securities equal to the haircut applied to the underlying instrument. In addition, in order to account for the credit risk associated with forward contracts, the unrealized profit on a particular forward

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15/ The time value premium of an option is the amount by which the option premium itself exceeds the option's intrinsic value. An option's intrinsic value is equal to the difference between the striking price and the stock price.

position generally is considered to be an unsecured receivable under the net capital rule and, therefore, is subject to a 100% capital charge.

The market risks related to forward contracts for commodities and U.S. government securities are adequately addressed under the existing net capital rule. Nevertheless, the Concept Release suggests an alternative capital charge for the market risk related to currency forwards. This approach would assess a capital charge on the net long or short position of all uncovered currency positions. The amount of the capital charge would depend upon to which of three categories the currency position was assigned.

The Concept Release also requested comment on the need to account for interest rate risk in currency forwards. Interest rate risk in a forward contract is the risk that a shift in the interest rate differential will cause the value of the forward contract to change even when there is no change in the spot rate. The Commission requested comments on an approach to address interest rate risk that would result in assigning currency forward positions to maturity bands and assessing a capital charge for interest rate risk depending on the maturity of each specific contract.

5. Interest Rate Swaps. The Concept Release presented two alternative approaches to the treatment of interest rate swaps under the net capital rule. The first approach would calculate exposure from a large interest rate swap book into a portfolio of specified debt securities that are equivalent, in terms of interest rate sensitivity, to the swap payment flows. These derived securities would then be treated under the net capital rule in the same way as actual bond positions with the same characteristics. The value of the derived securities would be calculated in terms of the zero coupon bond equivalent.

The second approach for the treatment of interest rate swaps is to assign the notional amount of the swaps to the maturity bands currently in use for government securities, and apply a capital charge, ranging from 0% to 6%, depending on maturity. The

capital charges of long and short positions in swaps could be offset depending on the relative maturities of the two swaps, or could be hedged with other debt instruments.

6. Currency Swaps. Under the net capital rule, currency swaps are treated as two currency forwards, one long and one short. The Concept Release requested comment on the application to currency swaps of the proposed treatment of currency forwards discussed above.

B. Credit Risk.

Unlike exchange traded derivative products, OTC derivatives involve credit risk, that is, the risk that the counterparty to the OTC contract will default. Historically, unsecured credit extensions have not been a significant element of a broker-dealer's business and as a result, the net capital rule treats very conservatively positions that entail unsecured credit risk. Because the unrealized profit on OTC derivatives generally is considered to be an unsecured receivable, broker-dealers are required to deduct 100% of this amount from net capital. This capital charge is assessed in addition to any applicable capital charge for market risk.

The Concept Release requested comments on an alternative approach to account for the credit risk associated with trading OTC derivatives. This approach would require broker-dealers to take two charges to their capital, a basic charge and a concentration charge. The basic charge is designed to protect against the risk that a counterparty defaults on its obligation under an agreement involving an OTC derivative contract and would require broker-dealers to take an 8% capital charge on the "credit equivalent amount" multiplied by a "counterparty factor." The "credit equivalent amount" would be equal to the current credit exposure on an open trade (the deficit),16/ plus some

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16/ The net deficit would be reduced by any margin or other deposits held by the broker-dealer or margin calls outstanding not more than two business days.

amount as a cushion. The "counterparty factor" would range from 0% for certain governments and central banks to a maximum of 50%.

The second capital charge, a concentration charge, is designed to discourage broker-dealers from assuming a large amount of credit risk with any one counterparty or assuming too much overall credit risk. The concentration charge would require broker-dealers to take a capital charge equal to the amount by which the net deficit with one counterparty exceeds 10% of the broker-dealer's tentative net capital (i.e., net capital before haircuts). In addition, broker-dealers would be required to take a capital charge equal to the amount by which the net deficit with all counterparties exceeds 25% of the broker-dealer's tentative net capital.

The Concept Release also requested comment on a second approach to the treatment of credit risk under the net capital rule. Under this approach, broker-dealers would be required to take a capital charge based on some percentage of the broker-dealer's total exposure to all counterparties. To account for the risk involved in entering into too many transactions with lower-rated counterparties, the amount of the charge on the particular exposure would depend on the credit rating of the counterparty and would be higher for lower-rated counterparties.

Question 3. Please discuss the types of dealers and end-users of derivatives that are not regulated in any manner. Do you feel that the derivative activities of such dealers and end-users should be regulated?

Generally, dealers and end-users of derivatives are divided among (i) entities regulated by federal securities, commodities, or banking regulators, including broker-dealers, futures commission merchants, investment companies, investment advisers, and banks; (ii) entities that may be regulated by the states, such as banks and insurance companies; and (iii) entities that may, at most, be required under certain circumstances to report investment holdings to federal or state regulators, such as corporations, pension plans and other institutional investors, and the unregistered subsidiaries and affiliates of broker-dealers and other financial services enterprises.17/

Particular dealers and end-users, such as banks, investment companies, and broker-dealers, are regulated to prevent them from taking undue risks and becoming imprudently leveraged. The Commission's net capital rule, for example, addresses credit and market risk assumed by broker-dealers in connection with their derivatives or other securities activities through the application of required net capital charges. The staff, however, has been informed by certain broker-dealers that the capital requirements necessary to conduct OTC derivatives activities in registered broker-dealers is one factor among others, including business, economic, and legal considerations, that has encouraged derivatives activities to be conducted in unregistered affiliates.

17/ Banks, and to a lesser degree, insurance companies, act as dealers in the derivatives markets. Among unregulated users of derivatives, corporations use derivatives for a variety of purposes, including to hedge against possible fluctuations in the costs of materials, interest rates, or currency exchange rates. Likewise, institutional investors may use derivatives to hedge against fluctuations in interest rates and currency exchange rates. However, difficulties in valuing derivative instruments may discourage some institutional investors, such as mutual funds or pension plans, from investing in these instruments where there is a requirement imposed upon fund managers to compute the net asset value of fund or plan investments on a continuous basis.

Given the diversity of dealers and end-users, any single system for the effective regulation of derivatives activities is likely to be unduly broad and impracticable. The risk assessment program,18/ however, will permit the Commission to monitor, on a periodic basis, any material risks to broker-dealers posed by the activities of their unregistered affiliates.

18/ The Commission's risk assessment program is discussed in response to Question 1.

Question 4. Please discuss the benefits that may be realized from utilizing derivative instruments, such as using them for risk management and asset-liability management purposes.

Could the development and use of derivative products by savings and loans (S&Ls) and others have helped to prevent the S&L crisis? For example, could the use of interest rate swaps by S&Ls have helped them to sufficiently control duration and interest-rate mismatches? (Especially mismatches due to long-term mortgage assets yielding low interest rates being combined with short-term liabilities commanding high interest rates.)

Dealers may benefit from derivatives activities to the extent that such activities provide a needed customer service and are a source of fee income. Dealer activities can present opportunities for trading gains, but likewise, they expose institutions to the potential for trading losses.

End-users use derivatives to modify market risks inherent in lending and investing activities. Since derivatives can be tailored to specific risks, they are an efficient supplement to traditional retail products that might otherwise be acquired to offset identified market risks. Derivatives can be used both to manage risk by offsetting anticipated cash flows to and from other financial instruments as well as for asset-liability management, enabling institutions to devise strategies to control effective interest margins and repricing periods.

Derivatives are effective tools for managing risk only if they are used properly. For example, derivatives can be used to modify the risks inherent in holding fixed-rate, long-term mortgages funded with deposits that reprice on a short-term basis. In developing such a derivatives strategy, it is necessary to take into account the risk of both rising and falling interest rate environments. An interest rate swap that requires an institution to pay a fixed-rate and receive a variable rate could effectively hedge the institution's fixed-rate mortgage risk in a rising interest rate environment. The same swap, however, could be devastating in a falling rate environment in which borrowers refinance mortgages at lower interest rates leaving the institution with a swap that requires it to pay a

higher fixed-rate while receiving a lower variable rate after its fixed-rate assets have evaporated. New product innovations such as index amortizing swaps,19/ are designed to protect against such effects. Thus, while derivatives can modify risks, the effectiveness of derivatives, like other financial instruments, depends upon prudent and effective investment strategies.

In addressing the question of whether derivatives could have helped to prevent the savings and loan crisis, we note that on January 13, 1989, Frederick D. Wolf, then the Director of the Accounting and Financial Management Division of the General Accounting Office, testified before the House of Representatives' Committee on Banking, Finance and Urban Affairs concerning (among other matters) the reasons for the recent failures of financial institutions. Reasons for the crisis as cited in Wolf's testimony included such items as poor credit underwriting, brokered deposits, mismanagement, and insider abuse. Although derivatives can be used to modify interest rate risk, they do not counter the credit risk or systemic risk associated with poor management practices in financial institutions.

It is conceivable that derivative products could be devised to hedge the types of interest rate and repricing mismatches that contributed to the savings and loan crisis. However, while the employment of derivatives strategies may have mitigated the severity of the savings and loan crisis, it is not possible to estimate how effective such derivatives strategies would have been.

19/ An index amortizing swap includes a notional amount reduction feature which is triggered by falling interest rates.

Question 5.a. What are your primary regulatory concerns regarding derivative activities of institutions supervised by your agency?

There is no disputing the utility and versatility of the OTC derivative products being brought to market today. The proliferation of OTC derivatives, however, raises certain issues of importance to regulators:

- Customer Suitability. The staff is responsive to indications that the customer base of the derivatives market, which began with only the largest, most sophisticated institutions, may reach the next tier of institutional investors. There are, for example, concerns that as derivative products become more popular, small institutions having fewer resources and a lesser degree of financial sophistication will turn increasingly to derivative products as tools to counter the effects of market volatility or to reallocate certain risks, particularly currency risks, associated with portfolio assets. Certain derivative products, such as detachable call options on municipal bonds or collateralized mortgage obligations, are available even to retail investors.

Many derivative products, however, may not be suitable for less sophisticated institutional and retail customers. While SRO rules already require broker-dealers to make suitability determinations before recommending customer trades, the Commission and the SROs will not hesitate to enforce the antifraud provisions of the federal securities laws and SRO customer protection rules to ensure that broker-dealers refrain from recommending unsuitable products to uninformed investors.

- Market Impact. The Commission staff is aware of the possibility that the increased use of derivatives could lead to the failure of one or more derivatives dealers during periods of extreme market stress, with this failure creating ripple effects throughout the OTC derivatives market for broker-dealers and other market participants.

In particular, the growth of the OTC derivatives market has raised issues with respect to counterparty credit risk, leverage, undue concentration, and internal control mechanisms.20/ To remain informed about the issues, the Commission relies on information from various sources, including on-site inspections of registered broker-dealers, information reported to the Commission pursuant to the Market Reform Act, discussions with market participants and fellow regulators, and numerous studies and other publications.21/ The Commission also has addressed these issues through a combination of its financial responsibility and reporting rules, particularly the net capital rule and the risk assessment program.

- Market Interaction. The interrelationships that exist among the cash markets and derivatives trading also cannot be ignored. Recent history has demonstrated, for example, how the liquidity of the nation's equity markets may be strained by the sell-off of stocks and futures by derivatives dealers and end-users trying to adjust their hedges to accommodate rapidly changing market risks.22/ Experience also has shown that market volatility can be magnified to the extent a few large dealers or investors dominate and are capable of moving a market.23/ The

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20/ These and other risks are addressed in the following studies: Group of Thirty, Report of the Global Derivatives Study Group, Derivatives: Practices and Principles (July 1993); Bank of England, Derivatives: Report of the Internal Working Group (Apr. 1993); Basle Committee on Banking Supervision, The Supervisory Recognition of Netting for Capital Adequacy Purposes (Apr. 1993); Bank for International Settlements, Recent Developments in International Interbank Relations (Oct. 1992).

21/ Id.

22/ The interrelationships among cash and derivatives markets are addressed more fully in response to Question 21.

23/ Based on these concerns, the Market Reform Act authorized the Commission to promulgate rules to monitor the trading activity of certain large traders in the market. The rules proposed by the Commission would require large traders to disclose to the Commission, at its request, certain information concerning their trading accounts and any affiliations or associations the large trader may have with other persons. See Securities Exchange Act Release No. 29593 (Aug. 22, 1991), 56 FR 42550 (As (continued...)

Commission's reconstruction of the trading activity during the 1987, 1989, and 1991 market declines demonstrates the relationship between the markets.24/

The Commission, however, does have means by which to address market linkage concerns. First, the Commission has approved so-called "circuit breakers," that is, procedures by which trading in options, securities, and futures will halt when the Dow Jones Industrial Average declines below certain limits. Secondly, the Commission's oversight of margin requirements for exchange-traded derivatives (as discussed more fully in response to Question 17) serves to minimize the potential for a liquidity crisis in the equity markets. Finally, in emergency situations, the Commission has the authority, as amended by the Market Reform Act, to suspend trading in a particular security, or on an entire exchange, for a period of time.

23/(...continued)
proposed, Rule 13h-1 would define "large trader" as every person who, for its account or an account for which it exercises investment discretion, effects transactions in "publicly traded securities" in an aggregate amount equal to or in excess of the activity level prescribed in the rule. Large traders could include individuals, hedge funds, banks, broker-dealers, insurance companies, investment advisers, mutual funds, pension funds, and trust companies. Proposed Rule 13h-1 would define "publicly traded securities" to mean national market system securities. Accordingly, the proposed rule generally would cover equities, options on individual equities, and options on an index of equity securities, that are listed for trading on a national securities exchange or the NASD's Nasdaq/NMS system.) Registered broker-dealers also would be required to maintain account and transaction records for each large trader and to report transactions to the Commission or a designated SRO upon request. The proposed rules would allow the Commission to collect information useful in evaluating periods of significant market activity, for instance, after periods of extreme stress such as those that occurred in 1987, 1989, and 1991. These rules have not been finalized and remain under consideration by the Commission.

24/ See Division of Market Regulation, October 1987 Market Break (Feb. 1988); Division of Market Regulation, Trading Analysis of October 13 and 16, 1989 (May 1990); Division of Market Regulation, Trading Analysis of November 15, 1991 (Oct. 1992). See also Report of the Presidential Task Force on Market Mechanisms (Jan. 1988).

b. Do you believe that any fundamental changes in the current regulatory framework for institutions using financial derivatives is needed at this time?

The Commission staff believes that the existing securities regulatory structure protects investors and maintains market stability, while remaining flexible to innovation. There are two areas, however, in which future change may be required to address derivatives activities, particularly those involving OTC derivative products.

First, it is hoped that any changes in the net capital treatment of OTC derivative products that develop from the Commission's review of its capital standards will encourage OTC derivatives activities now conducted in unregistered affiliates of broker-dealers to be brought within registered broker-dealers under Commission jurisdiction. As discussed in response to Question 1, the capital requirement necessary for effecting OTC derivatives transactions through registered broker-dealers has been one factor among others, including business, economic, and legal considerations, in dealer decisions to conduct OTC derivatives activities in unregistered affiliates or separately-capitalized DPCs.

Second, the establishment of one or more clearinghouses that specialize in the processing of trades in swaps may improve the current regulatory framework for the swaps market by helping to ensure the legal certainty of swaps transactions and by improving settlement efficiency through payment netting. A swaps clearinghouse also would provide a focal point for coordination of industry practices and communication with interested regulators. While there are regulatory issues involved in the establishment of a swaps clearinghouse, regulators should actively evaluate the development of such facilities.

Question 6. Is there adequate coordination between U.S. and foreign regulators to regulate risks associated with derivatives? Does the BIS report of April 1993 address all of your agency's concerns in this area?

There are on-going discussions among U.S. and foreign regulators regarding the appropriate regulatory treatment of derivative products. Specifically, the Commission has been an active participant in working groups and committees of the International Organization of Securities Commissions ("IOSCO") and a working group of the Basle Committee on Banking Supervision of the Bank of International Settlements (the "Basle Committee"), which have been discussing capital standards for equity and debt securities positions.

At the present time, the members of the Technical Committee of IOSCO have been unable to reach agreement on prudent capital standards and, therefore, have been unable to come to any agreement with the Basle Committee on capital standards. The Basle Committee recently proposed the establishment of market risk requirements for equity and debt securities positions, which the Commission staff currently is studying. The staff, however, is concerned that the offsetting provisions contained in the Basle Committee proposal are substantially more generous than those permitted under the Commission's net capital rule. Nevertheless, the Commission continues to participate in discussions with the regulators of other countries with the goal of formulating consistent approaches toward the regulatory treatment of derivative products.

In addition, the Commission has been actively involved with the IOSCO Working Party on the Regulation of Secondary Markets ("Working Party No. 2") that, among other things, has been examining the issue of coordination between cash and derivative products. Working Party No. 2 has produced three papers discussing various aspects of this topic: "Contract Design of Derivative Products on Stock Indices," which was approved by the IOSCO Technical Committee in January 1992; "Measures to Minimize

Market Disruption," which was approved by the Technical Committee in July 1992; and "Mechanisms to Enhance Open and Timely Communication between Market Authorities of Related Cash and Derivative Markets During Periods of Market Disruption," which was approved by the Technical Committee in June 1993. These three papers identify issues important to the relationship between the cash market and related derivatives markets for equities, and the effective oversight of these markets.

Question 7. Individual derivative contracts, taken by themselves, include elements of risk. However, derivatives, when evaluated as part of an institution's entire portfolio, are often used to offset and reduce the overall risk exposure of an institution. How do your regulatory actions, including capital and accounting standards, take into account the use of derivatives to reduce the overall risk exposure of an institution? For the purpose of regulation, how does your agency distinguish between derivatives used to hedge and reduce overall risk, such as many over-the-counter (OTC) contracts, and derivatives used for trading and other purposes, such as many exchange-traded contracts?

Derivatives are used for hedging and risk reduction, as well as for trading and other purposes. As a general matter, Commission and SRO rules do not distinguish between the use of derivative products for hedging purposes and their use for trading or other purposes, except in very specific circumstances. For example, the SROs distinguish between hedging and other trading purposes in their rules setting certain position limits in options trading. As a practical matter, however, distinctions in the use of derivatives typically are reflected in the internal controls of both dealers and end-users, and are considered in management decisions regarding appropriate risk management or investment strategies.

A. Net Capital Treatment.

In general, the net capital rule takes a conservative approach to hedging strategies that utilize various different investment products. For example, with respect to OTC options, the net capital rule permits certain hedging strategies, but only within categories of options. The net capital rule also does not permit a position in the equity security of one corporation to be offset by an option position in the securities of another corporation because the securities of the two corporations can move in different directions. More importantly, because the net capital rule applies only to registered broker-dealers, positions held by unregistered affiliates are not recognized as hedges against positions held by the broker-dealer.

B. Accounting.

Financial institutions that file financial statements with the Commission are required to follow generally accepted accounting principles ("GAAP") in the preparation of those financial statements. The Financial Accounting Standards Board ("FASB") has issued two statements addressing accounting for derivative securities; FASB Statement No. 52 Foreign Currency Translation, which addresses accounting for foreign exchange forward contracts (includes currency swaps), and FASB Statement No. 80 Accounting for Futures Contracts, which addresses accounting for financial and commodity forward contracts excluding foreign exchange contracts covered by Statement No. 52.

Statement No. 52 requires hedge accounting for foreign exchange contracts or transactions that are intended to hedge identifiable foreign currency commitments if:

- the foreign currency transaction is designated as, and is effective as, a hedge of a foreign currency commitment; and
- the foreign currency commitment is firm.

Statement No. 80 permits hedge accounting if:

- the item to be hedged exposes the enterprise to price or interest rate risk;
- the futures contract reduces that exposure and is designated as a hedge;
- at the inception of the hedge and throughout the hedge period, there is high correlation between the changes in the value of the futures contract and the value of the hedged item;
- the significant characteristics and expected terms of an anticipated transaction are identified; and
- it is probable that the anticipated transaction will occur.

Under Statement No. 80, use of hedge accounting requires the enterprise to perform an ongoing assessment of the effectiveness of the hedge throughout the life of the

hedge. A significant difference between Statement No. 52 and Statement No. 80 is that No. 52 allows hedge accounting only for firm commitments, while No. 80 allows hedge accounting for anticipated probable transactions.

Many derivative products have developed for which no FASB Statements have been issued. In certain limited circumstances, guidance has been provided by the FASB through its Emerging Issues Task Force ("EITF"). Whether accounting methods for derivatives that are not addressed either by FASB statements or an EITF issue consensus are acceptable depends upon general accounting practice, and whether they are consistent with basic accounting tenets. Thus far, accounting principles applicable to derivatives have developed based largely on FASB Statement No. 52 and Statement No. 80.25/ The acceptability of the accounting principles for derivative securities that are not addressed by FASB Statements or an EITF issue consensus depends upon general practice and has developed largely by analogy to Statement Nos. 52 and 80.

In May 1986, the FASB added a project on financial institutions to its agenda. In September 1991, the FASB issued a research report entitled, "Hedge Accounting: An Exploratory Study of the Underlying Issues." Throughout 1992 and 1993 the FASB has been holding meetings and deliberations on this matter, issuing a report in June 1993 entitled, "A Report on Deliberations, Including Tentative Conclusions on Certain Issues, Related to Accounting for Hedging and Other Risk-Adjusting Activities," that provided background information for meetings held in September of this year. On October 1, 1993

25/ In March 1992, the Chief Accountant of the Commission sent a letter to EITF representatives objecting to a proposed EITF consensus that would have permitted hedge accounting for certain complex options strategies intended to hedge foreign currency risks of anticipated transactions. In expressing the staff's opposition to the consensus, the Chief Accountant referred to FASB's Concept Statement 6 and Statements Nos. 52 and 80, and indicated that the staff also would object to hedge accounting with respect to written options because they increase, rather than reduce, risk. Letter from Walter Schuetze, Chief Accountant, to Timothy S. Lucas, Chairman of the EITF, and John E. Stewart, Chairman of the EITF Working Group on Issue 91-4 (Hedging Foreign Currency Risks With Complex Options and Similar Transactions) (March 18, 1992).

the FASB sent a questionnaire to persons who participated in hedging roundtable discussions in September, soliciting responses to 19 questions concerning applications of hedge accounting. While the FASB does not currently have a timetable for issuance of an exposure draft, it has committed great resources and time to its deliberations and the Commission looks forward to its continued progress.

The Commission staff also is reviewing current disclosure practices involving derivatives activities to determine whether additional disclosure guidance is needed.

Question 8. Recently published reports on derivative activities, such as the July 1993 Group of Thirty report entitled Derivatives: Practices and Principles and the May 1993 Institute of International Finance, Inc. (IIF) report entitled An Integrated Regulatory Approach to Derivatives Activities stress the importance of internal controls over regulation in many areas. However, the Group of Thirty report has been criticized by some for relying too heavily on industry self-regulation.

a. Regarding banks, the IIF report states, for example, that banks themselves should develop trading and credit policies that set their own risk limits. Do you think that such maximum risk limits should be set by institutions or by regulators?

While the July 1993 Group of Thirty report ("G-30 Report") attempts to encourage dealers and end-users of derivative products to develop appropriate systems for measuring and monitoring risks, the recommendations contained in the G-30 Report are only goals and there are no mechanisms in place to require the implementation of these recommendations. Even if such systems were put into place, however, there is no agreement among dealers and end-users on how to manage risk and it is unlikely that dealers and end-users would factor systemic risk into their individual risk calculations. For example, the G-30 Report states that most small end-users do not perform stress simulations essential in determining the risks associated with either a single investment decision or the management of a derivatives portfolio. Regulation may be the only means of ensuring that risk, including systemic risk, is adequately addressed by participants in the derivatives market.

While the Commission does not set risk limits for broker-dealers, it regulates risk by requiring broker-dealers to maintain a minimum level of liquid assets, or net capital, based on the business the firm transacts. As addressed in the response to Question 2, the net capital rule currently assesses significant charges for transactions in OTC derivatives because of concerns associated with the credit and liquidity risk associated with OTC products not subject to clearinghouse guarantees. While the Commission does not set maximum levels for the risks that may be assumed by a broker-dealer in taking a derivatives

position, the application of the net capital rule to the proprietary accounts of broker-dealers effectively contains risk in proportion to a broker-dealer's total capital.

b. In general, to what extent, and in what areas, do you think regulators should rely on internal controls versus regulatory requirements?

The Commission staff believes that good internal controls are an important element of the regulatory scheme for the registered broker-dealers under its jurisdiction. For example, Rule 17a-5 under the Exchange Act26/ requires registered broker-dealers to undergo an annual audit by an independent public accountant. The audit must be conducted in accordance with generally accepted auditing standards and, among other things, must include a review of internal accounting controls. In addition, under the Commission's risk assessment recordkeeping and reporting requirements, broker-dealers are required to maintain and file with the Commission their risk management policies.

Other areas, including capital requirements and risk disclosure, are better addressed by the implementation of clear regulatory standards. However, further evaluation is necessary in order to determine appropriate levels of regulation to limit risks to dealers and end-users and minimize the system-wide effects of market disturbances.

c. Do you feel that any of the "Recommendations for Dealers and End-Users" contained in the Group of Thirty report (Recommendations 1-20) should be formally mandated by regulation? Please comment on the different issues addressed in the recommendations with specificity.

The recommendations of the Group of Thirty were not written with a view to establishing a regulatory scheme for dealers or end-users. While some of the principles overlap with regulatory requirements currently in place or under study by the Commission, most are recommended internal controls that provide guidance in areas properly left to business managers. For the most part, as they apply to registered broker-dealers, they reflect principal elements of an adequate system of internal control.

26/ 17 C.F.R. § 240.17a-5.

- **Recommendation 2: Marking to Market. Dealers should mark their derivatives positions to market, on at least a daily basis, for risk management purposes.**

Broker-dealers are required to mark their derivatives positions to market on a daily basis pursuant to the Commission's net capital rule.

- **Recommendation 11: Aggregating Credit Exposures. Credit exposures on derivatives, and all other credit exposures to a counterparty, should be aggregated taking into consideration enforceable netting arrangements. Credit exposures should be calculated regularly and compared to credit limits.**

The Commission has not taken a position regarding the advisability of aggregating credit exposures. However, the Concept Release requested comments regarding the extent to which netting of contracts with a single counterparty should be permitted.

- **Recommendation 20: Disclosures. Financial statements of dealers and end-users should contain sufficient information about their use of derivatives to provide an understanding of the purposes for which transactions are undertaken, the extent of the transactions, the degree of risk involved, and how the transactions have been accounted for.**

The G-30 Report was unable to find an objective mechanism for disclosing market risk that was not unduly burdensome to market participants and was, therefore, unable to discuss how or to what extent market risk should be disclosed. However, disclosure is an appropriate subject for regulation not only due to concerns regarding investor protection, but also in order to counter any tendency to minimize risks.

Question 9. Please comment on the four "Recommendations for Legislators, Regulators, and Supervisors" contained in the July 1993 Group of Thirty report (Recommendations 21-24) as they are relevant to your agency. Please comment on each recommendation separately.

- **Recommendation 21: Recognizing Netting. Regulators and supervisors should recognize the benefits of netting arrangements where and to the full extent that they are enforceable, and encourage their use by reflecting these arrangements in capital adequacy standards. Specifically, they should promptly implement the recognition of the effectiveness of bilateral close-out netting in bank capital regulations.**

As discussed in the Concept Release, the Commission staff believes that netting arrangements have the effect of reducing the overall credit risk exposure in derivative products, but have no effect on the market risk element of derivative risk. The Concept Release requested comments regarding the extent to which netting of contracts with a single counterparty should be permitted.

- **Recommendation 22: Legal and Regulatory Uncertainties. Legislators, regulators, and supervisors, including central banks, should work in concert with dealers and end-users to identify and remove any remaining legal and regulatory uncertainties with respect to:**

  - **The form of documentation required to create legally enforceable agreements (statute of frauds).**

As stated in a survey discussing concerns over the enforceability of OTC derivatives transactions prepared for the Group of Thirty's Global Derivatives Study Group, 27/ there is legal uncertainty regarding the type of writing required for the purchase and sale of OTC derivatives transactions due to conflicts between the statute of frauds requirements in New York's Uniform Commercial Code and the New York General Obligations Law. While it is important that these uncertainties be resolved, it also should be noted that such uncertainties are not unique to New York and regulators should support efforts to promote uniformity in the commercial law area. One such important effort is the National

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27/ Global Derivatives Study Group Enforceability Survey--United States prepared by Cravath, Swaine & Moore (June 22, 1993).

Conference of Commissioners on Uniform State Laws' ongoing project to revise Articles 8 and 9 of the Uniform Commercial Code as they relate to the creation, perfection, transfer, and pledge of security interests in securities. In addition, in pursuing its mandate to identify impediments to the prompt and accurate clearance and settlement of securities transactions, the Commission's Market Transactions Advisory Committee continues to address ways to promote commercial law uniformity.

- **The enforceability of bilateral close-out netting, multibranch netting, and collateral arrangements in bankruptcy.**

The staff supports efforts to remove the uncertainty surrounding bilateral close-out netting, multibranch netting, and collateral arrangements in bankruptcy. Experience with the default of the Drexel Burnham Lambert conglomerate and other market participants suggests that there is a need for greater certainty and coordination in this area. The Commission staff is prepared to assist in any efforts necessary to promote certainty.

- **Recommendation 23: Tax Treatment.**

The staff declines to comment on Recommendation 23 because the tax treatment of derivative products is beyond the scope of the Commission's regulatory jurisdiction.

- **Recommendation 24: Accounting Standards. Accounting standards-setting bodies in each country should, as a matter of priority, provide comprehensive guidance on accounting and reporting of transactions in financial instruments, including derivatives, and should work towards international harmonization of standards on this subject. Also, the International Accounting Standards Committee should finalize its accounting standard on Financial Instruments.**

Currently, the American Institute of Certified Public Accountants (the "AICPA") Stockbrokerage and Investment Banking Committee is in the process of revising the Audit and Accounting Guide for Brokers and Dealers in Securities. It may be appropriate, however, to ask the AICPA to augment the guide with more specific guidance on internal controls over derivatives, especially with respect to managing market and credit risks.

In May 1986, the FASB added a project on accounting for financial instruments to its agenda. Among the discussion memoranda and statements issued in connection with the project, several have particular relevance to derivative securities, particularly Statement No. 105, Disclosure of Information about Financial Instruments with Off-Balance Sheet Risk and Financial Instruments with Concentrations of Credit Risk (March 1990), and Statement No. 107, Disclosures about Fair Value of Financial Instruments (December 1991). These statements require disclosure of credit risk and fair value of financial instruments.

In September 1991, as part of the financial instruments project, the FASB issued a Research Report entitled, "Hedge Accounting: An Exploratory Study of the Underlying Issues," which includes consideration of the use of derivatives instruments for hedging. In June 1993, the FASB issued another report entitled, "A Report on Deliberations, Including Tentative Conclusions on Certain Issues, Related to Accounting for Hedging and Other Risk-Adjusting Activities" to provide background information for meetings held in September 1993 to discuss hedging issues. The FASB subsequently issued a survey questionnaire to participants in the September meetings. The FASB is continuing to work on its comprehensive project on disclosure, measurement, and recognition of financial instruments, including consideration of derivatives. The staff is supportive of the FASB's efforts.

The Commission staff is also supportive of the efforts of the International Accounting Standards Committee ("IASC"), including its efforts to adopt a comprehensive accounting standard on financial instruments. IASC currently has outstanding an exposure draft that comprehensively addresses accounting and disclosure standards for financial instruments. The staff has expressed its objections to certain accounting standards proposed

in the draft and has asked that the IASC issue another exposure draft for comment.28/

28/ See letter from Walter Schuetze, Chief Accountant, to David Cairns, Secretary-General, IASC (Oct. 22, 1993).

Question 10. If the July 1993 Group of Thirty "Recommendations for Dealers and End Users" (Recommendations 1-20) are not implemented by regulation, are there adequate mechanisms in place to ensure that such recommendations will be self-implemented? Concern has arisen regarding whether or not one can depend solely on the forces of managerial responsibility and market discipline as sufficient incentives to motivate firms to incur the implementation costs of the recommendations. Does your agency believe that mechanisms, such as periodic surveys of industry practice, a timetable for implementation, or a monitor of such actions are warranted?

Generally, the Commission has a mechanism in place to ensure that certain recommendations set forth in the G-30 Report are being implemented with regard to registered broker-dealers. Many of the recommendations relate to the adequacy of the internal control mechanisms that a securities firm has in place to manage its derivatives activities. In this regard, the Commission's risk assessment rules require certain broker-dealers to file summaries of their risk management policies. In connection with the risk assessment program, the staff of the Commission has been evaluating these policies as well as other financial information that is received in the quarterly risk assessment reports. In addition, periodic visits are made to the major securities firms that conduct derivatives activities to assess their credit and risk management policies. Staff discussions with securities firms as part of this ongoing process of review have shown that the recommendations contained in the G-30 Report are being reviewed by the major securities firms and either are being followed or implemented in appropriate circumstances. The Commission staff also is evaluating whether additional recommendations may be needed.

Question 11. Please comment on whether institutions should be required to establish separately-capitalized subsidiaries to conduct derivative activities.

Whether it would be beneficial to require that institutions establish separately-capitalized subsidiaries through which to conduct derivatives activities is, in the first instance, a question of prime importance to banks and bank regulators. One reason to segregate derivatives activities into separately organized bank affiliates is to transfer the risk of loss from conducting such activities out of institutions protected by deposit insurance, thereby shielding the Federal Deposit Insurance Corporation and, ultimately, the U.S. taxpayer from potential bank losses resulting from derivatives activities.

In cases where a determination is made that securities trading is not involved, broker-dealers currently conduct derivatives activities through separately organized, unregistered affiliates. During the past two years, at least three U.S. broker-dealers have established separately-capitalized, AAA-rated DPCs as derivatives dealers.29/ The net capital rule's conservative treatment of unsecured credit risk, which is present in most OTC derivative products, is one of the reasons given for segregating derivatives activities from other securities-related activities conducted by registered broker-dealers.

Whether DPCs should be regulated as broker-dealers, or subject to other forms of regulation, has not been decided by the Commission. The advantage, of course, in having derivatives activities conducted in registered broker-dealers is that securities regulators would have the opportunity to develop and ensure compliance with risk monitoring procedures and would be able to establish and adjust capital requirements associated with derivatives trading. In this regard, the Concept Release solicited comment on the appropriate net capital treatment of DPCs, assuming that DPCs are registered with

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29/ For a discussion of the establishment of AAA-rated affiliates by firms such as Merrill Lynch, Goldman Sachs & Co., and Salomon Brothers. see Peltz, "Wall Street's Triple-A for Effort", Institutional Investor (May 1993); Liebowitz, "Can the Triple-A Subs Live Up to Their Billing?", Investment Dealers' Digest (Nov. 2, 1991).

the Commission. The Commission has extended the comment period on the Concept Release until December 17, 1993.

Question 12.a. Do you believe the netting provisions contained in the Bankruptcy Code, FIRREA, and FDICIA should be conformed to a single standard? Do the netting provisions in these statutes adequately cover all situations? If not, what situations do and don't they cover?

Generally, a single standard would provide greater certainty and predictability to market participants in the event of a market crisis. It is our understanding, however, that legislative differences often reflect policy judgments about who should bear the loss in the event of a participant default. The July 1993 G-30 Report and accompanying appendixes identify certain circumstances where the current regulatory scheme leaves an element of uncertainty.30/ The Commission has not yet formulated a view on the need to harmonize these provisions.

b. Please discuss the resolution of derivative contracts in the failure of Drexel Burnham Lambert. How effective were the current legal mechanisms, such as the Bankruptcy Code, in resolving the contracts?

When the Drexel Burnham Lambert conglomerate ("Drexel") began having financial difficulties in February 1990, the Commission, in conjunction with the CFTC, the Federal Reserve Bank of New York, and various other regulators, oversaw the winding down of the activities, including the derivatives activities, of the Drexel entities. Together these agencies were able to wind down these activities in an orderly manner, without cost to U.S. taxpayers.31/ Today, the Commission receives standardized regulatory reports

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30/ For a detailed analysis of the issues surrounding OTC derivatives and netting under the Bankruptcy Code, FIRREA, and FDICIA, see "Over-the-Counter Derivatives Transactions: Netting under the U.S. Bankruptcy Code, FIRREA and FDICIA," Memorandum of Law for the International Swaps and Derivatives Association, Inc. prepared by Cravath, Swaine & Moore (June 22, 1993).

31/ The collapse of Drexel pre-dated, and was at least in part the stimulus behind, passage of the Market Reform Act. which gave the Commission the ability to monitor the activities of broker-dealer affiliates under rules implementing the risk assessment program.

regarding the financial activities of broker-dealer holding companies and their affiliates under the risk assessment program.

c. How did the withdrawal of certain uncommitted credit lines and other funding difficulties in 1991 for Salomon Brothers resulting from the Government Securities issue affect its ability to meet its derivative obligations?

On August 9, 1991, Salomon Brothers, Inc. ("Salomon") announced that it had reported to the appropriate government agencies the discovery of violations of law and other irregularities in certain bids that it had submitted in several auctions of United States government securities during the previous year. On May 20, 1992, Salomon settled the Treasury auction investigation by paying a $290,000,000 fine, agreeing to a Commission injunction and administrative order, and being suspended from trading activity with the Federal Reserve Bank for two months.

Despite its Treasury auction violations and the related investigation and penalties, Salomon was able to meet all of its existing obligations to customers and creditors, including those involving derivative products. After disclosure of its Treasury auction violations, however, the number of new interest rate swaps into which Salomon entered declined. This may have been a result of counterparties' reluctance to do business with a firm whose long-term prospects at that time had been called into question. Nevertheless, it does not seem that Salomon's ability to satisfy its ongoing obligations was adversely affected by its involvement in the government securities bidding scandal.

Question 13. Recommendations contained in the July 1993 Group of Thirty report (Recommendation 20) and elsewhere state that until harmonized accounting and disclosure standards are set, certain disclosures should be made by dealers and end-users. Although a disclosure regarding credit risk is recommended, a similar disclosure for market risk is not mentioned. Should a summary measure of market-risk exposure be disclosed? If so, what form should such a measure take?

Users of financial statements require information relevant to market risk in order to analyze the performance and prospects of an enterprise. Traditionally, GAAP has not required disclosure of information that would facilitate evaluation of market risk exposure. Recently, FASB Statement Nos. 105 and 107 32/ were issued, requiring enterprises to disclose the fair value of all financial instruments whether on- or off-balance sheet. Enterprises that acquire and account for derivative products as hedges usually report the fair value of the derivative products on an aggregated basis with the assets or liabilities hedged. Dealers that engage in derivatives activities generally report their derivatives activities on an aggregate basis with other trading account activities. In neither event is separate disclosure of the market risk of derivative products provided. Although Statement No. 107 does not require disclosure of the nature and terms of derivatives or other financial instruments, the fair value disclosures that are required provide an indication that the enterprise is exposed to market value risk.

The Commission's regulations applicable to financial reporting exceed requirements under GAAP by requiring disclosure of information that is indicative of a registrant's market risk exposure from on-balance sheet items. For example, Article 5 of Regulation S-X 33/ requires disclosure of the general character of each type of short- and

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32/ See FASB Statement No. 105, Disclosure of Information about Financial Instruments with Off-Balance Sheet Risk and Financial Instruments with Concentrations of Credit Risk (Mar. 1990); FASB Statement No. 107, Disclosures about Fair Value of Financial Instruments (Dec. 1991).

33/ See 17 C.F.R. § 229.210.5.

long-term debt instrument, including interest rate and maturity date. Industry Guide 3,34/ which identifies certain statistical information that must be disclosed by financial institutions, requires disclosure of average balances of each major category of interest-bearing asset and liability, including disclosure of average and year-end yields on each major class of interest-bearing asset and liability. The information required by Regulation S-X and Industry Guide 3 provides insight into the market risk to which a registrant is exposed through its major on-balance sheet lending and investing activities. To the extent that derivatives are accounted for as hedges of on-balance sheet financial instruments, the yield data reported in the Industry Guide information includes the effects of such hedges.

Additionally, Item 303 of Regulation S-K,35/ Management's Discussion and Analysis of Financial Condition and Results of Operations ("MDA"), requires registrants to discuss information about liquidity, capital resources, and results of operations that the registrant believes is necessary to an understanding of its financial condition, cash flows, and results of operations. This very broad requirement is intended to elicit disclosure extending to transactions or other factors which are not required by GAAP, and while not evident from the financial statements or other disclosures, are necessary to an understanding of a company's historic, continuing, and prospective operations and financial condition. Specifically, Item 303(a)(3)(ii) requires registrants to "[d]escribe any known trends or uncertainties that have had or that the registrant reasonably expects will have a material favorable or unfavorable impact on net sales or revenues or income from continuing operations." This provision would require a registrant to disclose the existence of derivatives that are reasonably expected to have a material impact on future income. In fact, the staff has observed instances in which registrants have used MDA to disclose the

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34/ See Regulation S-K, Items 801 and 802. 17 C.F.R. §§ 229.801 and 229.802.

35/ See 17 C.F.R. § 229.303.

existence of derivative positions that have had, or that will have, a material impact on results of their operations.

The banking agencies have developed market risk measurements for financial instruments, including derivatives, that are incorporated into risk-adjusted capital evaluations. The safety and soundness objectives of risk-based capital measurement make a single measure of market risk feasible. A single measure of market risk, however, may not be useful to investors in the equity and debt securities of issuers. The market risk dynamics of derivatives require more elaborate disclosure of the financial instruments exposing the enterprise to market risk. Information describing the nature and magnitude of exposure due to derivatives is needed to inform investors concerning the impact of derivatives on the future operations and financial condition of the enterprise. The Commission staff is reviewing current disclosure practices concerning derivatives activities with a view to considering whether additional disclosure guidance is needed in this area.

Question 14. Please comment on the notion of establishing a clearinghouse offset mechanism for swaps transactions. How would a clearinghouse offset separately affect dealers and end-users? Would either benefit more than the other?

A properly structured and regulated clearinghouse for swaps transactions could benefit both dealers and end-users in the swaps market. Benefits to dealers would include:

(1) improved data collection and trade matching;

(2) improved risk management;

(3) enhanced management of mark-to-market and the potential for multilateral netting;

(4) potential for mutualization of risks; and

(5) centralized management of relations with, and dissemination of information to, regulators, banks, and market participants.

In addition, a clearinghouse could help protect market participants as the market expands to include a greater number and variety of counterparties with less than AAA credit ratings. Properly structured clearinghouses also can enhance competition to the benefit of end-users. Our experience has been that clearinghouses provide dealers and end-users with operational efficiencies that can result in savings to dealers whether or not they are direct participants in the clearinghouse. Such cost savings could be passed on to end-users. Moreover, the competition created by expanding the market to include more dealers should benefit end-users through lower transaction charges, and because the increased liquidity of the market should help ensure that end-users receive best execution. Finally, a clearinghouse offset that includes multilateral netting by novation would reduce systemic risk by improving credit availability and enhancing market and dealer liquidity.36/

36/ The G-30 Report noted that although national banking regulators have been unwilling to recognize in capital adequacy rules the effects of close-out netting provisions contained in master agreements, netting by novation has been recognized. As the report further noted, however, on April 30, 1993, the Basle Committee on Banking (continued...)

At the same time, however, many details need to be worked out before an effective clearinghouse offset mechanism could be established. For example, because swaps typically are highly customized, low volume instruments, there may be limited opportunities for offsets. In addition, for a clearinghouse to manage effectively the risks swaps create, it must be able to obtain accurate historical measures of price and volatility. Currently, however, there is a lack of publicly reported data to permit pricing of derivatives contracts to protect against potential price volatility. Such information is necessary to the development of appropriate clearing mechanisms.

A swaps clearinghouse must be structured in a manner to generate and maintain market participant and, ultimately, investor confidence in the face of market crisis or potential systemic risks. Generally, public confidence can best be assured through federal oversight of clearinghouses. The existing regulatory scheme embodied in the Exchange Act provides a potential structure through which the Commission and federal banking regulators effectively could share supervisory responsibilities.

36/(...continued)
Supervision of the Bank for International Settlements ("BIS") released a consultative paper which proposed recognizing bilateral close-out netting as an amendment to the agreed framework for measuring bank capital adequacy published by the Basle Committee in July 1988. The Governors of the BIS accepted and endorsed the proposal in the consultative paper as a basis for wider consultations with interested parties.

Question 15. Are there adequate mechanisms currently in place to protect unsophisticated end-users of derivative products? If not, what are your recommendations?

The federal securities laws and the rules and regulations of the various SROs provide investors with certain general protections in connection with making investments in securities, including derivative products. Under Commission and SRO rules governing broker-dealer sales practices, broker-dealers have a duty to provide their customers with best execution of their trades and to determine customer suitability before recommending trades. While these requirements apply to all securities transactions, in options transactions, broker-dealers are subject to additional requirements under the federal securities laws, including the imposition of heightened customer suitability standards. In particular, SRO rules prohibit member firms from recommending to any customer any options transaction unless the firm has reasonable grounds to believe that the recommended transaction is not unsuitable for the customer on the basis of information furnished after reasonable inquiry concerning the customer's investment objectives, financial situation, and needs. In addition, the SROs, with Commission oversight, have implemented a program of options account regulation that includes several other special rules relating to account opening procedures, discretionary trading, customer complaints, and sales advertising, including the requirement that broker-dealers provide options customers with a copy of an options disclosure document containing information on the characteristics and risks of options trading. The broker-dealer must provide the disclosure document prior to the time the customer begins trading options.

Currently, it appears that most derivatives trading occurs among financial and other institutions that, generally, have the bargaining power to obtain necessary information to evaluate investment strategies. As discussed in response to Question 5.a., while certain derivative products are becoming available to retail investors, many of these products may not be suitable for less sophisticated institutional and retail investors. As new derivative

products are developed for retail investors, the Commission intends to evaluate whether existing provisions of the federal securities laws and SRO regulations continue to afford adequate protection of these retail investors.

Question 16. What kind of stress test simulations do you recommend to account for the different types of risk which arise as a result of financial derivative activity?

In assessing the risk of derivative products, Commission rules distinguish between credit risk and market risk. The market risk of a derivative product is the risk of adverse price fluctuations in the price of the contract. Credit risk is the risk that the counterparty to a transaction will default. The Commission's current treatment of unsecured credit risk, and alternative treatments suggested in the Concept Release, are explained in the response to Question 2. Set forth below is a discussion of the Commission's method of dealing with market risk.

An essential purpose in assessing capital charges is to provide a firm with a cushion of capital against adverse market movements. For example, the 15% haircut applicable to equity securities protects against a 15% decline in the market. With respect to derivatives, we believe that market risk capital charges, similarly, should provide a cushion of capital for broker-dealers in times of market stress.

As discussed in the Concept Release, another approach to assessing market risk capital charges is the use of a pricing model. The Commission staff is working with the Options Clearing Corporation towards development of a theoretical pricing model for exchange traded options that would be used to determine haircuts for broker-dealers' standardized options positions under the net capital rule. The proposal under consideration would require broker-dealers to take a capital charge on a portfolio of options on a given underlying instrument equal to the difference between the closing market prices and the options' theoretical prices after applying assumed market movements of the underlying and after netting theoretical profits and losses on those positions. Broker-dealers would be required to apply sufficient stress simulations to the options' theoretical price so that adequate capital charges could be assessed to protect a firm in times of market stress.

Question 17. Please comment on your agency's view of the proper use and level of collateral in derivative transactions.

Margin for standardized derivative products plays a significant role in protecting market efficiency and minimizing systemic market risk, and is an effective means of controlling the leverage available in a financial instrument. Several benefits flow from the maintenance of adequate margin levels. First, adequate margin serves to reduce speculative trading by highly leveraged participants. Under normal market conditions, insufficient collateral creates an illusion of liquidity. Under adverse market conditions, however, liquidity can disappear swiftly as highly leveraged participants exit the market quickly, contributing to downward pressure on prices. Second, adequate margin levels reduce the capital exposure of broker-dealers and clearing firms during periods of market volatility. Finally, sufficient margin requirements for standardized derivatives serve to protect the entire financial system when markets are under stress. The higher the margin levels, the lower the possibility that margins will be raised swiftly during stress periods. This helps to avoid a liquidity crisis when markets are already under stress.

Margin also could serve a useful function for OTC derivatives. Collateral protects against the risk that a counterparty to OTC derivatives transactions will default on its commitments. Thus, because collateral decreases the unsecured risk associated with OTC derivative products, it reduces credit risk exposure. For this reason, margin and collateral requirements are important features of the Commission's financial responsibility requirements. For example, in areas of repurchase agreements, stock borrowings, and stock loans, margin and collateral requirements are important.

OTC derivatives trading, however, has developed differently than trading in standardized derivative products. In some instances, collateral is collected from a counterparty to an OTC derivatives contract for the purpose of reducing unsecured credit risk. In general, however, the current practice is to make a credit judgment of the

counterparty and not collect any collateral. Although it may be preferable that all transactions be collateralized, industry competition may make this impracticable.

The G-30 Report noted that credit risk reduction arrangements, such as collateral and margin arrangements and third-party credit enhancements (e.g., guarantees and letters of credit), can be useful in the management of counterparty credit risk. The Commission staff agrees with this statement and, as part of its review of the application of the net capital rule to derivative products, intends to study effective ways to address unsecured credit risk in connection with derivative products.

Question 18. When assessing a counterparty for credit risk, how much relative emphasis should be placed upon factors such as capital, disclosure and credit rating? For example, should a credit rating be a proxy for capital?

Credit ratings are no substitute for prudent capital standards. The Commission, however, does rely to a limited extent on ratings issued by Nationally Recognized Statistical Rating Organizations ("NRSROs") in determining the capital charges required for various types of debt instruments. For example, under the net capital rule, if nonconvertible debt securities are rated in one of the four highest rating categories by at least two NRSROs, the required haircut is lower than if the security is not so rated. Under the existing net capital rule, a capital charge of 100% is required on all unsecured receivables, regardless of the credit worthiness of the counterparty. Because the unrealized profit related to certain OTC derivatives, generally, is treated as an unsecured receivable, it is subject to a 100% capital charge.

The Concept Release presented two approaches to the treatment of the credit risk associated with OTC derivatives products that would be based, to a limited extent, on the credit worthiness of the counterparty. One approach would require broker-dealers to take two charges to their capital to account for the credit risk inherent in OTC derivatives, a basic charge and a concentration charge. The identity of the counterparty would affect the amount of the basic charge.37/

The second approach would be based entirely on the credit rating of the counterparty. This approach would require a broker-dealer to take a capital charge based on some percentage of the broker-dealer's exposure to all counterparties. The charge would be higher for lower-rated counterparties. Comments received in response to the Concept

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37/ The basic charge portion would require a broker-dealer to take an 8% capital charge on the "credit equivalent amount" multiplied by a "counterparty factor." The "counterparty factor" would be zero for certain governments and central banks, 20% for multilateral development banks and certain regional governments and credit institutions, and 50% for all other entities.

Release will be evaluated to determine whether it is advisable to incorporate into the net capital rule these proposals or other credit risk-based requirements that incorporate the use of ratings.

Question 19. Are executive decisions regarding derivatives, on average, concentrated in too few individuals in each institution to catch problems in a timely manner? Should the decision-making process, where derivatives are involved, be decentralized to enhance internal controls?

Executive decisions regarding derivatives are influenced by the internal control structures within securities firms. Existing accounting and auditing principles, as well as certain Commission rules, require that registered broker-dealers, and public companies subject to Commission registration and reporting requirements, have in place adequate internal control systems. The Commission staff, in connection with the risk assessment program, has been evaluating the risk management policies of major securities firms. During the course of the staff's review, it has learned that, as a general matter, the major securities firms are structured so that derivatives trading activities are subject to several layers of review and are not concentrated in too few individuals. For example, some firms have risk management departments that are independent of trading desks, and require that trades be reviewed by separate credit departments that assess counterparty credit risk. Many firms also maintain active oversight of derivatives activities by senior management.

Question 20. Do compensation policies currently in place adequately discourage undue risk-taking? For example, if employees benefit financially from risk-taking in a direct manner, how is such risk-taking controlled?

Compensation policies for skilled securities industry professionals, such as investment bankers and derivative products traders, generally are set by competitive market forces. Competition to retain professionals often means that industry employees are compensated under performance-based systems. Staff review of securities firms in connection with the Commission's risk assessment program indicates that, in general, adequate systems are in place to prevent employees from taking undue risk. For example, in order to establish and oversee compliance with risk limits, many firms have in place risk management departments or risk management committees that are independent of trading desks. Many firms also have compensation arrangements in place whereby the compensation of compliance and risk management personnel is not related to the performance of the trading desk under their review. However, the staff believes that supervisory oversight is necessary to assure that risk management policies are being implemented.

Question 21. What is the level of systemic risk resulting from derivative activities? Do you agree with those who assert that derivative activities are concentrated in too few institutions?

Systemic risk is the risk that a disruption by any participant or group of participants causes widespread difficulties throughout financial markets. In this regard, there are two areas in which derivatives activities could pose systemic risks to U.S. markets. The first area of concern deals with the failure of market participants. This concern is not unique to derivative products and, indeed, it is possible that a securities firm or other financial institution could fail as a result of trading or other business activities, with such a failure having collateral effects throughout the marketplace. The staff believes, however, that the Commission and the SROs have in place sufficient regulatory controls to ensure that the failure of a registered broker-dealer, for whatever reason, could be handled without resulting in serious, system-wide problems.

Second, there are concerns about the interrelationships among markets, particularly among derivatives and related cash markets. While the Commission is addressing systemic risk concerns through implementation of its risk assessment program and its reexamination of the appropriate capital treatment of OTC derivatives, recent history has demonstrated how the liquidity of the nation's equity markets may be strained by the sell-off of stocks and futures by derivatives dealers trying to adjust their hedges to accommodate rapidly changing market risks.

A study conducted by the Commission's Division of Market Regulation following the historic market decline in October 1987 indicated that, among the many factors contributing to the sell-off of stocks and futures and the resulting market decline, was the dynamic hedging sale of stock index futures and stock baskets by institutions following "portfolio insurance" strategies. While each institution's selling might have seemed relatively small and isolated to that particular institution's money manager, and probably

could have been accommodated by normal market liquidity, the cumulative effects of this selling by a group of large institutions following the same strategies had a devastating impact on the stock and futures markets.38/

At least partially in response to perceived problems with the operation of portfolio insurance strategies during the 1987 Market Break, many institutional money managers reduced their reliance on portfolio insurance strategies, choosing to shift the market risk of their equity portfolios by negotiating OTC equity derivatives with broker-dealers and other market professionals. Similar to portfolio insurance, many of these OTC equity derivatives function like index put options, shifting market risk to OTC dealers. Also, the magnitude of these OTC derivatives is not disclosed to the investing public or other market professionals. As a result, both portfolio insurance and OTC equity derivatives pose unspecified, but potentially large, selling pressure that can have a significant "overhang effect" on the markets, particularly during a period of extraordinary volatility.

For example, during the market decline in October 1989, trading analyses revealed that as market prices began to drop, some providers of OTC equity derivatives engaged in forced selling of futures in order to hedge their proprietary risk, placing stress on an already fragile market. Those providers who could not hedge with futures due to vanishing liquidity in the S&P 500 futures pit, had to sell stocks near the close.39/ During the market decline in November 1991, some providers of OTC equity derivatives also engaged in concentrated selling of futures and stock baskets, although as a result of the smaller magnitude of the market decline, the sell-off was less significant than in 1989.40/

38/ See Division of Market Regulation, October 1987 Market Break (Feb. 1988). See also Report of the Presidential Task Force on Market Mechanisms (Jan. 1988).

39/ See Division of Market Regulation, Trading Analysis of October 13 and 16, 1989 (May 1990).

40/ See Division of Market Regulation, Trading Analysis of November 15, 1991 (Oct. 1992).

The market-wide effects of so-called "dynamic hedging" selling during market declines suggest that regulators should take prudent measures to study the potential for similar selling by providers of OTC equity derivatives during any future market decline.

With regard to concentration, the staff does not believe that derivatives activities are concentrated in too few institutions. While concentration is a concern, OTC derivatives dealers tend to be well-diversified, highly capitalized firms that are, arguably, well-suited to weather adverse market developments.

Question 22. Cash liquidity risk for a firm appears to be of greater concern the greater is a firm's involvement in derivative activities, the greater is its reliance on short-term funding, the lower is its credit standing, and the more restricted is its access to central bank discount or borrowing facilities. Therefore, in contrast to depository institutions who, among other things, have access to the discount window, securities firms may find cash management requirements, such as maintaining margin requirements, arising from large derivatives portfolios to be more challenging. Compared to depository institutions, how does the less liquid nature of the securities business affect its derivative activities and the risks associated with such activities?

A broker-dealer's assets, generally, are more liquid than those of depository institutions. The net capital rule requires broker-dealers to mark their securities and commodities positions to market and to deduct from net worth all illiquid assets and unsecured receivables, together with percentage deductions of the firm's proprietary securities and commodities positions. As a result, most broker-dealers' assets are highly liquid, taking the form of readily marketable securities or commodities positions and cash. In addition, most broker-dealer receivables tend to be secured by either liquid assets or cash.

According to the 1992 Annual Industry Survey by Lipper Analytical Securities Corporation, U.S. registered broker-dealers had total assets of $744.2 billion, total equity of $28.5 billion, and subordinated debt of $14.9 billion.41/ An analysis of that information shows that for 1992, 96.5% of the assets were highly liquid. In addition, U.S. registered broker-dealers reported pre-tax income of $5.8 billion in 1991 and $6.1 billion in 1992.42/ Further, an analysis of total asset composition for eight public holding companies and their broker-dealer affiliates by Standard & Poor's shows that in 1992, liquid assets for broker-dealer holding companies ranged from 93% to 99%.43/ It also should be noted that during

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41/ Lipper Analytical Securities Corporation, Lipper Securities Industry Financial Analysis Service 16 (Mar. 1993).

42/ Id. at 15.

43/ Standard & Poor's, CreditReview, May 31, 1993, at 40.

the last two years, internally generated funds from operations have been an important source of liquidity.

Therefore, it is fair to conclude, as a general matter, that the U.S. securities industry is well capitalized, highly liquid, and adequately managed. In addition, it would appear that the U.S. securities industry is on a footing comparable to that of U.S. depository institutions with respect to the liquidity necessary to conduct derivatives activities.

Question 23. Criticism of speculators in the derivative markets, primarily exchange-traded derivatives such as currency futures and options, has focused on the alleged ability of such speculators to manipulate markets. Concerns have also arisen as to potential depository institution exposure as a result of speculators' activities. Please comment on these criticisms and whether or not such speculators should be subject to increased regulation or supervision.

Derivatives markets can be used for both speculation and hedging. While the activities of speculators may raise popular concerns about market manipulation and volatility, it can be argued that speculators provide a useful function in the marketplace by assuming positions that other market participants are unwilling to take, including positions on the other side of those using hedging strategies. As a result, speculators add liquidity to the derivatives markets by increasing the volume of bids and offers in the markets, making it easier for those wishing to hedge to establish and later liquidate such positions quickly and on competitive terms.

While speculators provide some tangible benefits to derivatives markets, there must be sufficient regulation in place to curb abuses. The market for currency derivatives is predominantly an OTC, inter-bank market. As a result, to the extent that manipulation occurs in this market, it more likely would be a matter for Federal banking regulators. The only securities exchange-traded currency options in the United States are those listed and traded on the Philadelphia Stock Exchange ("Phlx"). The Phlx has not experienced manipulation involving its currency options.

The federal securities laws establish a regulatory framework to deter and detect market manipulation. SRO options trading rules, for example, minimize the potential for market manipulation through the implementation of rules governing the types of securities on which derivatives can be listed and traded, position limits, exercise limits, and margin requirements. While limiting the potential for manipulation, the rules permit speculators and other investors to take positions in the derivatives markets.

SRO rules allow exchange-traded derivatives to be listed only if the underlying security is listed on a national securities exchange or traded through the facilities of a national securities association, and has a substantial number of outstanding shares that are widely held and actively traded. These listing and maintenance standards are based on experience that indicates that if a security is widely-held and actively traded, it is less likely that derivatives trading will have an effect on the market for the underlying security.

Other SRO rules also minimize the potential for market manipulation. Position limits prevent the accumulation of large options positions that, if exercised against uncovered writers of options, would cause them to buy the underlying stock, thereby affecting the price of the underlying stock. The position limit rules also have the additional effect of limiting the financial exposure of market participants. Exercise limits restrict the number of contracts that can be exercised during a five business day period. Margin rules reduce credit risk by ensuring that investors have sufficient assets to fund their obligations in the event of adverse market movements.

Question 24. What, if any, effect will the depositor preference provision of the Omnibus Budget Reconciliation Act of 1993 have on the derivatives market?

The depositor preference provision of the Omnibus Budget Reconciliation Act of 1993 addresses the liquidation of failed insured depository institutions, subordinating the claims of counterparties to derivatives transactions to the claims of domestic depositors. In the event of such a failure, the likelihood that a counterparty would be able to recover on its outstanding contracts is reduced, increasing the risk that the failure of the depository institution could result in the destabilization or failure of other participants in the derivatives market.

By raising questions regarding the ability of counterparties to recover on derivatives contracts, U.S. depository institutions may be put at a competitive disadvantage as compared to other derivatives dealers. As a result, it is possible that dealing activity could become further concentrated in unregistered entities, including the domestic and foreign affiliates of registered broker-dealers and foreign banks, and could compound existing concerns regarding the concentration of derivatives positions in a few, large market participants. To the extent dealing activity is further concentrated in affiliates of registered broker-dealers, the Commission will continue to collect information under the risk assessment program regarding material risks to broker-dealers posed by the activities of their affiliates.

Question 25. Please provide a list and discussion of SEC proposals regarding the regulation of derivatives currently under consideration.

As the regulator of active exchange markets in derivative products, the Commission has a variety of proposals outstanding with respect to the operation of these markets and the clearing agencies associated with them. The Commission, however, has one primary outstanding proposal specifically regarding the regulation of OTC derivative products.

As discussed extensively throughout this paper, the Commission's Concept Release solicited comment on a broad range of questions regarding the capital standards imposed by the net capital rule on broker-dealers participating in derivatives markets. In examining the treatment of derivative products, and particularly OTC derivative products, the Concept Release focused primarily on the market and credit risks to which participants in derivatives markets are exposed and presented several alternatives to the current treatment of these instruments under the net capital rule. The staff will recommend such additional regulatory changes as are deemed appropriate based on data concerning the derivatives market that is obtained pursuant to the Commission's risk assessment program or otherwise.

Question 26. Please provide, if available, a summary of comments received or any relevant update on the SEC Net Capital Concept Release No. 34-32256 dated May 4, 1993.

To date, the Commission has received five comment letters in response to the Concept Release. The comments received thus far are outlined below.

(1) Both the Securities Industry Association and the Chicago Board Options Exchange requested only that the Commission extend the comment period until the end of 1993 so that they can fully consider the issues regarding derivative products raised in the Concept Release. As noted in response to Question 11, the comment period has been extended until December 17, 1993.

(2) The Registration Exemption Committee of the North American Securities Administrators Association made one general comment regarding the Concept Release, specifically, that because the systemic risk aspect of derivatives is relevant to the commodities and banking regulatory agencies, as well as the Commission, these other regulators should be involved in the Commission's development of proposals regarding derivatives.

(3) The American Stock Exchange ("Amex") expressed concern about the effect that changes to the treatment of OTC derivatives under the net capital rule might have upon the market for listed derivatives. The Amex commented that the Commission should not take any action that would affect adversely the listed market for derivatives by making the OTC market relatively more attractive. In addition, because there are no position and exercise limit requirements in the OTC market, the Amex requested that the Commission review the need for such requirements in the listed market.

(4) The Risk Management Center ("RMC")44/ provided extensive comments in response to the questions posed by the Commission in the Concept Release regarding the credit risk associated with derivative products.

(i) In response to Question 16,45/ the RMC stated its belief that the second approach to the treatment of credit risk proposed by the Commission was preferable. As discussed in reply to Question 2, above, the second approach is based entirely on the credit rating of the counterparty. This approach would require a broker-dealer to take a capital charge based on some percentage of the broker-dealer's exposure to all counterparties and would be higher for lower-rated counterparties. Because this approach is based on the actual credit rating of the counterparty, the RMC believes that it provides a better measure of default risk. It notes, however, that objective measurements for credit ratings are necessary.

(ii) In response to Question 17,46/ the RMC suggested that a broker-dealer's future credit exposure be determined based upon a "portfolio approach," which, to the extent netting is enforceable, should be based on the overall net expected cash flow of a broker-dealer. To the extent netting arrangements are not enforceable, the RMC recommended that future credit exposure be calculated using a "greater of longs or

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44/ The Risk Management Center is a coalition of Chicago financial institutions and businesses including major banks, the four Chicago exchanges, universities, trading and investment firms, and corporations.

45/ Question 16 in the Concept Release sought comment on which of two approaches for the treatment of the credit risk associated with OTC derivatives is preferable. See the reply to Question 2 above for a discussion of these two alternative approaches.

46/ The Commission solicited comment in Question 17 in the Concept Release on how the capital rule should be structured to reduce potential future credit exposure.

shorts" approach. In other words, rather than basing net capital on a percentage of gross positions (that assumes that in the future all position values could simultaneously decline in value), a greater of longs or shorts approach would calculate potential exposure under future interest rate and currency scenarios with the capital charge for future credit exposure based only on the worst case. Use of such an approach would require individual dealers to have sophisticated systems for monitoring risk.

(iii) In response to Question 18 regarding the extent to which netting of contracts with a single counterparty should be permitted47/, the RMC indicated that netting should be permitted to the extent multiple products are documented under the same master agreement and netting is enforceable under the laws of the applicable jurisdictions. The RMC also stated that in jurisdictions where it is not clear that netting applies, capital charges should be based on gross positive mark to market values for current exposure, and a greater of longs or shorts approach for potential future exposure. The RMC also recommended that legal agreements that contain collateral or credit risk reducing techniques be considered.

(iv) In response to Question 19 regarding the appropriate cushion to be added to the "credit equivalent amount" under the first alternative approach to the treatment of the credit risk associated with OTC

47/ Question 18 in the Concept Release asks not only the extent to which netting of contracts with a single counterparty should be permitted, but also what consideration should be made for the uncertainty related to the legality of netting arrangements throughout the world, and what distinctions should be drawn between those contracts that have termination clauses and those that do not.

derivatives under the net capital rule,48/ the RMC suggested that more refined distinctions be made between contracts of varying durations. The Concept Release proposed that the "credit equivalent amount" be equal to 1% of the notional amount of contracts with less than one year to maturity, and 5% of the notional amount of contracts with greater than one year to maturity. Because five and ten year contracts are common, the RMC suggested that additional categories be created to better account for risk and that dealers be permitted to use pre-approved models to assess dynamically the cushion to be used.

48/ Question 19 in the Concept Release asks for recommendations on the amount of cushion that should be added to the "credit equivalent amount" portion of the proposed alternative approach to the treatment of credit risk under the net capital rule. "Credit equivalent amount," as discussed in the reply to Question 2, above, is the current credit exposure of an open trade plus some amount added as a cushion. This "credit equivalent amount" multiplied by a counterparty factor would comprise the basic capital charge proposed to protect against the risk that a counterparty defaults on its obligation under an agreement involving an OTC derivative contract.

ATTACHMENT F

The Commodity Futures Trading Commission Response

COMMODITY FUTURES TRADING COMMISSION
2033 K Street, N. W., Washington, DC 20581

Sheila C. Bair
Acting Chairman

(202) 254 - 8870

October 29, 1993

The Honorable James A. Leach
Ranking Member, Committee on Banking, Finance
and Urban Affairs
U.S. House of Representatives
2129 Rayburn House Office Building
Washington, D.C. 20515-6050

Dear Congressman Leach:

Thank you for your letter of August 31, 1993. The Commodity Futures Trading Commission ("Commission" or "CFTC") welcomes this opportunity to respond to your inquiries regarding financial derivatives. The Commission shares your view that financial derivatives are becoming increasingly important financial tools which raise important policy issues. As you know, the Commission has studied many of these issues and recently submitted its report of this study, OTC Derivative Markets and Their Regulation ("CFTC Study"), to the Congress. Many of the issues which you raise are addressed in the Commission's report, which is appended to this response.

The Commission's responses to your specific inquiries reflect its role as the regulator of the nation's futures and commodity options markets -- the largest regulated derivatives marketplace in the world. Generally, our responses to the questions you have posed are limited to Commission-regulated markets,

which are only a part of the overall derivatives marketplace. However, we have noted, where appropriate, areas in which the Commission's report on OTC derivatives or the Commission's particularized experience with the regulation of futures and commodity options may be useful in addressing the broader derivatives marketplace. Our responses to your specific inquiries follow.

QUESTION 1 **To outline your agency's supervision and regulation of derivatives, please summarize and provide the written policies and procedures currently used by your agency to regulate and monitor derivative activities, including licensing, registration, and trading limits. Also, please provide a summary of your regulatory authority over derivative transactions.**

Simply stated, the Commodity Futures Trading Commission has jurisdiction over one part of the domestic derivatives marketplace -- the trading of futures contracts and commodity options. The term "derivatives" potentially includes all interests and instruments, whether or not traded on organized futures or securities exchanges, that are contracts specifying rights and obligations based upon, and that derive their value from, the performance of some underlying instrument, investment, currency, product, index, right, service or rate. Under this broad definition, derivative transactions include, among other types of products, futures and commodity options and standardized securities options, all of which are traded on organized exchange

markets; hybrid products, such as oil-indexed notes, which combine elements of futures contracts with securities or depository interests; transactions such as swaps, which have elements of regulated futures contracts but have been exempted from CFTC regulation subject to certain conditions; and certain "forward" markets, such as the interbank foreign currency market and the Brent oil market, which are used for risk shifting as well as for transfer of ownership of a commodity. The CFTC's recently completed study focuses on swaps and other derivative products traded in the over-the-counter market.

The CFTC was established in 1974 as an independent federal regulatory agency and vested with exclusive jurisdiction over the nation's futures and commodity options markets.[1/] Federal futures regulation, however, has a long history, beginning with the enactment of the Grain Futures Act in 1922. At that time, Congress found regulation of futures transactions necessary due to their importance to the national economy -- as both hedging vehicles and price basing mechanisms. Futures transactions continue to be important for these purposes. Futures and commodity options transactions are widely used by producers, proces-

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1/ Specifically, Section 2(a)(1)(A)(i) of the Commodity Exchange Act grants to the Commission exclusive jurisdiction over "accounts, agreements (including any transaction which is of the character of, or is commonly known to the trade as, an 'option,' . . .), and transactions involving contracts of sale of a commodity for future delivery . . . and all services, rights, and interests in which contracts for future delivery are presently or in the future dealt in." 7 U.S.C. § 2.

sors, dealers, financial institutions, collective investment vehicles and other users of underlying commodity interests to manage the price risks of their businesses. Futures transactions also facilitate commerce nationally and internationally as their prices are relied upon by large numbers of commercial entities, who may or may not participate directly in the futures or options markets, and by dealers pricing transactions in the over-the-counter markets.

The CFTC Regulatory Framework

The regulatory framework established by the Commodity Exchange Act ("CEA" or "Act") and Commission regulations addresses market integrity, financial integrity and customer protection. Briefly stated, the CEA and Commission regulations regulate the futures and commodity option exchanges and their clearing facilities, the design of products traded, and the persons soliciting or handling transactions for customers.

The purpose of this regulatory framework is to ensure the integrity of the futures markets, protect market participants against manipulation, abusive trade practices and fraud, and encourage competitiveness and efficiency. The core requirement is that transactions in commodity futures contracts occur only on or subject to the rules of exchanges, which have been designated by the Commission as contract markets and which are subject to Commission oversight. The Act allows the Commission to approve, suspend or revoke contract market designations, disapprove and

alter exchange rules that are inconsistent with the objectives of the CEA, and direct exchanges to take emergency action. The CEA contains broad anti-fraud and anti-manipulation provisions; requires reporting and recordkeeping by exchanges; and prohibits noncompetitive trading practices such as wash sales and fictitious sales. Commodity professionals are subject to requirements relating to registration, the protection of customer funds, minimum capital, recordkeeping, disclosure, and reporting. All traders of regulated contracts are subject to large trader reporting requirements and speculative position limits or position accountability limits.

The Act also gives the Commission broad authority to conduct investigations and to bring civil or administrative enforcement actions for violations of the CEA. Such actions can result in injunctions and ancillary relief, civil monetary penalties, cease and desist orders, the suspension or revocation of registrations with the Commission, orders prohibiting trading on Commission-regulated markets, and restitution orders. The Act establishes private rights of action in federal court and a Commission reparations procedure designed to enable customers to bring damage actions against commodity professionals for fraud or other violations of the CEA. Finally, the CEA establishes criminal sanctions for price manipulation, embezzlement and other willful violations of the CEA or Commission regulations.

(The Commission's regulatory framework is discussed in greater detail in Chapter II of the CFTC Study and Working Paper 3).

CFTC Provisions for Off-Exchange Transactions

The futures regulatory framework was designed to assure that all futures transactions would take place on regulated exchange markets through regulated intermediaries registered as futures commission merchants ("FCMs") and subject to minimum capital and other requirements. All other forms of futures transactions generally are prohibited, with the exception of certain types of commercial option transactions. However, a series of exceptions to the exchange-trading requirement has been developed, generally on the basis that the exempted transactions are (1) unsuitable for exchange trading and (2) entered into by parties who are engaged in a line of business involving the commodity that is the subject of the transaction or who satisfy financial criteria designed to assure their competence to engage in such transactions without otherwise applicable regulatory protections. These exemptions to the exchange-trading requirement are relevant to over-the-counter derivatives activity, which is the subject of the CFTC's Study and which has become the focal point for public debate.

Cash Forward Contracts. Forward contracts are commercial, merchandising transactions in physical commodities in which delivery routinely occurs but is deferred for commercial purpos-

es. Forward contracts are specifically excluded from CFTC jurisdiction and thus are essentially unregulated.

Trade Options. Trade options are exempted by CFTC rules from the general prohibition against off-exchange futures and commodity options transactions. They are off-exchange commodity options offered and sold to commercial entities whose business involves the commodity (or by-products thereof) that is the subject of the transaction and who enter into the transaction for purposes related to that business. Rule 32.4(a) permits the sale of off-exchange commodity options in circumstances in which the offeror "has a reasonable basis to believe that the option is offered to a producer, processor or commercial user of, or a merchant handling, the commodity which is the subject of the commodity option transaction" and that such commercial party is offered or enters into the transaction "solely for purposes related to its business as such." Trade option transactions are subject to prohibitions against fraud, certain types of representations, and unreasonable failures to secure prompt execution of commodity option orders by persons receiving such orders. Currently, trade options on agricultural commodities are prohibited.

Swaps. Pursuant to exemptive authority granted under the Futures Trading Practices Act of 1992 ("FTPA") and set forth in Section 4(c) of the CEA, the CFTC recently adopted exemptive rules which provide a safe harbor from most CFTC regulatory requirements for swap transactions meeting specified criteria.

The exemption is limited to swap agreements entered into by "eligible swap participants," which include various categories of institutional and commercial entities and natural persons with substantial assets. Eligible swap participants include, for example: banks; investment companies; corporations or other entities which have total assets exceeding $10,000,000, or who have net worth exceeding $1,000,000 and are entering into the swap transaction in connection with the conduct of their business; employee benefit plans subject to the Employee Retirement Income Security Act of 1974 ("ERISA") with total assets exceeding $5,000,000; broker-dealers; FCMs; and natural persons with total assets exceeding $10,000,000.

In addition to restricting the categories of participants eligible to participate in exempt transactions, the CFTC's swaps exemptive rules impose restrictions upon the design and execution of the transactions that distinguish them from exchange traded futures contracts. To qualify for exemption: the swap may not be part of a fungible class of agreements that are standardized as to their material economic terms; the creditworthiness of any party having an actual or potential obligation under the swap agreement must be a material consideration in entering into or determining the terms of the swap agreement; and the swap agreement may not be entered into or traded on a multilateral transaction execution facility (a physical or electronic transaction

execution facility in which participants can simultaneously effect transactions and bind both parties).

The CFTC swaps exemption does not exempt swaps from all statutory anti-fraud and anti-manipulation prohibitions.[2/] However, in all other respects the exemption allows swaps transactions to occur free of the regulatory framework applicable to futures exchanges and intermediaries. No prescriptive, affirmative requirements as to the conduct of the transactions, other than the participant, design and execution criteria of the exemptive rules, apply to qualifying swaps.[3/]

Hybrid Products. In July 1989, the Commission adopted rules regarding certain hybrid instruments combining characteristics of

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[2/] The swaps exemption is also subject to CEA Section 2(a)(1)(B), 7 U.S.C. § 2a, which relates to the allocation of regulatory responsibility for stock index futures contracts and options between the CFTC and the Securities and Exchange Commission ("SEC") and imposes certain interagency requirements with respect to approval of stock index futures trading.

[3/] Although the CFTC's swaps exemptive provision preserves the applicability of statutory anti-fraud and anti-manipulation prohibitions, these prohibitions are limited to specified types of conduct involving futures contracts or the cash market. There is no statutory or regulatory anti-fraud provision expressly designed to cover swaps. For example, Section 4b of the CEA, the general anti-fraud provision, prohibits, among other things, any person from cheating, defrauding or attempting to cheat or defraud any person "in or in connection with any order to make, or the making of, any contract of sale of any commodity for future delivery . . . for or on behalf of any other person." Liability under this provision thus would arise from a swap transaction only to the extent that a futures contract under the CEA were shown to be involved. Further, some have suggested that the statutory requirement that the transaction be one undertaken "for or on behalf of" another person could be read to confine liability to persons acting in an agency or broker capacity for another.

commodity options with debt, preferred equity or depository interests. The rules established a safe harbor from Commission regulation for these types of instruments based upon the limited nature of their commodity option component and deference to other federal and state regulatory frameworks applicable to their non-commodity component. In addition, in January 1989 and April 1990, the Commission issued, and subsequently re-issued in refined form, a statutory interpretation applicable to hybrid instruments that combine characteristics of futures contracts or commodity options with debt or depository instruments. The Commission essentially determined that the commodity component of instruments covered by the statutory interpretation was relatively insignificant in nature and that they would be deemed to be excluded from Commission jurisdiction. Furthermore, after enactment of the FTPA, the Commission used its new exemptive authority to issue amended exemption rules, effective February 22, 1993, with respect to hybrid instruments.

Energy Contracts. By order issued April 13, 1993, the CFTC exempted certain contracts for the deferred purchase or sale of specified energy products from regulation under the CEA. The order applies to contracts for the deferred purchase or sale of crude oil, condensates, natural gas, natural gas liquids, or their derivatives that are used primarily as an energy source. The contracts must be entered into between commercial participants meeting specified requirements. These requirements relate

to, among other things, the capacity to make or take delivery, regulated status, and minimum net worth or total assets, which evidence the commercial status of the parties and distinguish the exempted transactions from those required to be effected on approved exchanges. Under the order, qualifying contracts are exempted from all provisions of the CEA except Section 2(a)(1)(B), the so-called "jurisdictional accord" between the CFTC and SEC,[4/] and the provisions prohibiting price manipulation.

Foreign Currency Transactions. Foreign currency transactions are subject to varying types of regulation under the CEA, depending on the context in which they occur and the nature of the counterparties. Spot (or "cash") foreign currency transactions and forward contracts on foreign currencies are excluded from regulation under the CEA, as are all other spot and forward transactions. Foreign currency futures and option transactions are subject to the CEA exchange-trading requirement and all other applicable requirements except to the extent that foreign currency options may be traded on national securities exchanges subject to SEC regulation[5/] or are exempted by CFTC rule. Two CFTC

[4/] See note 2, supra.

[5/] Foreign currency options traded on CFTC-regulated exchanges are subject to the CFTC's regulatory framework to the same extent as all other futures and exchange-traded commodity options; foreign currency options traded on national securities exchanges are regulated by the SEC. Section 4c(f), 7 U.S.C. § 6c(f).

regulatory exemptions are potentially available with respect to foreign currency options: the trade option exemption, which is limited to options offered to commercial users; and the swaps exemption, which includes within the definition of swap agreement for purposes of the rule an agreement which is a "currency option."

Discussion of the regulatory treatment of foreign currency transactions is further complicated by the so-called "Treasury Amendment," a CEA provision which states that the CEA shall not be deemed to apply to, among other things, "transactions in foreign currency . . . unless they involve a sale for future delivery conducted on a board of trade." The scope of this provision has been subject to considerable debate and litigation. Its legislative history suggests that the statutory provision was intended to preclude CEA regulation of the interbank market, which was described as a market subject to bank regulatory oversight, in which transactions generally occurred between banks and "other sophisticated institutional participants." This "market" was believed to be "more properly supervised by the bank regulatory agencies." The CFTC has interpreted the Treasury Amendment to be inapplicable to transactions involving members of the

general public, but not all courts have agreed with that view.[6/]

[6/] See the discussion of Salomon Forex, Inc. v. Tauber, No. 92-1406 (4th Cir. October 18, 1993) and CFTC v. Standard Forex, Inc., C.V. 93-0088 (E.D.N.Y. August 9, 1993) in Chapter V of the CFTC Study.

QUESTION 2 **Please discuss in detail margin requirements, both current and proposed, as they relate to derivative activities regulated by your agency. Also, please comment on the sufficiency of such requirements.**

Historically, margin requirements for futures contracts have been established by the designated futures exchanges, subject to CFTC authority to set margin levels to address market emergencies. Under Section 8a(9) of the CEA the Commission has broad emergency powers applicable to all futures contracts, "to direct the contract market, whenever it has reason to believe that an emergency exists, to take such action as in the Commission's judgment is necessary to maintain or restore orderly trading in or liquidation of any futures contract, including, but not limited to, the setting of temporary emergency margin levels on any futures contract . . . ." The CFTC also has plenary authority over options margin systems for exchange traded options subject to CFTC jurisdiction.

Effective October 28, 1992, the FTPA amended the CEA to provide, among other things, for review by the Board of Governors of the Federal Reserve System ("Board") of contract market rules establishing or changing the levels of initial and maintenance margins for stock index futures contracts or options thereon. The amendment requires filing of such rules with the Board and specifies that the Board may request or direct the contract market to set margin levels "appropriate to preserve the financial integrity of the contract market or its clearing system or

to prevent systemic risk." On March 22, 1993, the Board delegated to the Commission its day-to-day stock index margin authority under this provision of the Act.[1/] Thus, the Commission now has authority to review margin levels for stock index futures or options contracts, and to request or direct a contract market to set such margins at specified levels, subject to judicial review.

With respect to the "sufficiency" of such requirements, the delegated statutory authority provides that the Commission may request or direct margin levels "appropriate to preserve the financial integrity of the contract market or its clearing house or to prevent systemic risk." In delegating this review authority to the CFTC, the Board observed that stock index futures and margin levels should be reviewed in the context of other safeguards, such as frequent marking-to-market of positions, standby liquidity arrangements, participant audits, market surveillance, active risk management, and other parts of the overall risk control system employed by the exchange and its clearing system. This approach accords with that of the President's Working Group on Financial Markets ("Working Group") as set forth in the Working Group's report,[2/] and the Commission adheres to the

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[1/] The Board has reserved the right to exercise its authority in emergency circumstances such as a market disruption.

[2/] Interim Report of the Working Group on Financial Markets, May 1988. The Working Group is comprised of the chairmen of the Board, SEC and CFTC, and the Secretary of the Treasury.

standards espoused by the Working Group in implementing its delegated margin authority.

In addition, please comment on the sufficiency of capital requirements, both current and proposed, set by other regulatory agencies as they relate to derivative activities of institutions. Do you feel the current capital standards are adequate?

Unlike banking regulatory capital requirements, the capital requirements of the CFTC and the SEC are so-called "liquid capital" rules. That is, the CFTC and SEC capital rules are designed to assure that assets can be readily marshalled and liquidated in an emergency situation for the protection of customers and other creditors. Currently the capital charge for unsecured credit risk is 100%. This renders most OTC derivative activities within the regulated entity prohibitively costly.

Relevant aspects of the CFTC's calculation of regulatory capital also are harmonized with SEC requirements. For example, the CFTC follows the SEC "haircuts"[9/] for the market risk of proprietary positions in instruments subject to SEC jurisdiction. The CFTC currently does not permit its regulatees to grant OTC commodity options and charges significant haircuts for forward contract obligations. Like the SEC, the CFTC is exploring whether changes should be made in its minimum capital require-

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9/ A "haircut" is a deduction taken in a firm's capital computation in order to account for specific risks and uncertainties and is enumerated in regulatory capital rules. The intended regulatory result is that a firm's capital, after the deduction of all required haircuts, will be the amount of liquid capital a firm has after a reserve has been set aside for market contingencies.

ments or separate requirements should be adopted to accommodate certain types of OTC activity without harm to the prudential protections in place.

QUESTION 3 **Please discuss the types of dealers and end-users of derivatives that are not regulated in any manner. Do you feel that the derivative activities of such dealers and end-users should be regulated?**

This is an area in which the CFTC finds the data currently available to be insufficient. However, the CFTC Study provides some information concerning the nature of dealer and end-user participation in the OTC derivative marketplace. As indicated in the Study, based upon available data concerning activities of U.S.-based swaps dealers as of year-end 1992, commercial banks' positions were from three to five times larger than those of either non-banks or U.S. units of foreign dealers. (CFTC Study at 26). End-users include financial institutions (commercial banks, thrift institutions, insurance companies, and financial subsidiaries of corporations), government agencies and corporations. The data available are insufficient to permit determination of the exact extent of participation by unregulated dealers and end-users in OTC derivatives.

The CFTC Study notes that concerns have been expressed about apparent concentrations of OTC derivatives activity in large dealers, some of whom are unregulated. (CFTC Study at 114-15, 129). The report identifies information needs with respect to dealer activity as an area for exploration by federal regulators on a coordinated, interagency basis. Thus, the Commission has not made any recommendations concerning regulation of derivative dealers or end-users and believes that, as a preliminary matter,

information gaps and sources should be identified and explored. The Study also notes, however, that federal regulators may have a role in encouraging sound internal control practices by both dealers and end-users and supports further review of this area by federal regulators. (CFTC Study at 134-35).

With respect to CFTC-regulated futures and commodity options traded on regulated exchanges, there is no dealer activity since all transactions must be effected through the exchange marketplace. Brokerage firms are required to be registered with the CFTC and are subject to various regulatory requirements, as more fully described above. The futures regulatory framework generally does not provide for regulation of end-users but imposes speculative position limits or position accountability requirements that are designed to provide protection against price manipulation and requires reporting of the positions of large traders to facilitate market surveillance. The futures regulatory framework also prevents access of certain retail customers to the OTC marketplace.

QUESTION 4 **Please discuss the benefits that may be realized from utilizing derivative instruments, such as using them for risk management and asset-liability management purposes.**

Could the development and use of derivative products by savings and loans (S&Ls) and others have helped to prevent the S&L crisis? For example, could the use of interest rate swaps by S&Ls have helped them to sufficiently control duration and interest-rate mismatches? (Especially mismatches due to long-term mortgage assets yielding low interest rates being combined with short-term liabilities commanding high interest rates.)

Derivative instruments in their various forms provide a wide range of benefits to market participants. For the past 130 years, futures contracts on agricultural commodities have represented a common form of derivative instrument in this country. The benefits of these contracts to those involved in agriculture are well known. By establishing positions in the futures markets opposite to cash market positions or obligations, participants in agricultural markets have been able to reduce their exposure to price changes. For example, by establishing a short position in the Chicago Board of Trade wheat contract, an Illinois grain elevator operator can offset losses on his inventory of wheat, due to a fall in price, through gains that accrue to his futures position. The long-term user of futures contracts to hedge cash market price exposure benefits through the stabilization of revenue flows. In addition to the direct benefits of hedging to users of futures markets, others in the marketplace benefit from

the price discovery function of futures markets. By providing continuous, well-publicized prices, futures markets provide information to all individuals involved in the trading, production and marketing of interests on which futures contracts are traded.

Futures on financial instruments and foreign currencies provide comparable risk management opportunities to individuals and businesses facing uncertain price exposure. Thus, a furniture manufacturer in North Carolina or an automobile manufacturer in Michigan that exports goods to foreign countries is able to offset its exposure to exchange rate changes in much the same way as those in the agricultural industry are able to manage risk using the futures markets. Similarly, banks which hold portfolios of bonds are able to offset their exposure to interest rate changes.

In addition to the traditional use of futures as a hedge against a cash market position, investment managers employing modern portfolio management theories now use futures to manage the overall risk-return profile of cash portfolios by adding exposures to sectors not represented in those portfolios. For instance, a portfolio manager holding a portfolio of stocks might adjust the risk-return profile of the portfolio by establishing a position in bond futures. By diversifying the portfolio in this manner, losses in the stock market might be offset by gains in the other sectors. Holders of bond portfolios have also found

futures contracts to be an efficient way of adjusting the duration of their portfolios.

More recently, the scope of derivative products has broadened. For example, in the past decade, exchange traded options, swaps and hybrid instruments have been added to the mix of derivative instruments available to market participants. Many of the benefits associated with these contracts are similar to those associated with futures contracts -- that is, they allow users to manage price exposure risk. However, they differ from futures in that they allow users to fine tune their risk management activities to a greater degree than is easily accomplished with futures contracts.

As an example, swaps contracts are agreements between two parties to swap different payment streams. For example, a payment stream based on a fixed interest rate (say, 8%) may be exchanged for a payment stream based on a variable interest rate (e.g., the current 3-month Treasury bill rate plus 0.5%). The price exposure involved with these contracts is similar to that involved with futures contracts. A significant difference between swaps and exchange traded futures, however, is that swaps can be fully customized, for example, as to contract size and underlying instrument, to meet the particular needs of the counterparties. Futures contracts, by contrast, as historically traded on exchange markets, are highly standardized, a feature which permits liquidation of contracts through offset on a

multilateral, anonymous basis, and substitution of the clearing organization as the universal counterparty and guarantor of all cleared contracts.

Hybrid instruments combine equity, debt or depository interests with commodity futures or option elements. These instruments enable issuers to both raise capital and manage risk. For example, an oil company can issue a hybrid bond which pays annual interest but also ties the principal repayment to the price of oil. That is, if the price of oil rises, a larger repayment is made. Such an instrument may allow the oil company to issue the bond at a lower interest rate since the instrument represents a better credit risk because the company is asked to pay more when it is in a position to do so and less when it is not. Similarly, hybrids were issued in connection with the Brady Plan such that more money would be repaid if the value of specified commodities in such countries increased, thereby facilitating repayment of debt owed U.S. institutions by certain less-developed countries.

While the S&L crisis of the 1980s involved myriad forces and events including mismanagement, fraud, and regulatory changes, most knowledgeable observers of the S&L industry would agree that the precipitating cause of the crisis was the unprecedented increase in interest rates in general, and the increase in short-term rates versus long-term rates in particular, that occurred during the late 1970s and early 1980s. Knowledgeable use of derivative products such as interest-rate futures, options and

swaps might have eased the financial strain that many S&Ls endured as a result of this increase in interest-rate volatility. This potential utility was recognized by federal bank and S&L regulators, who early on approved the use of interest-rate futures and options for purposes of reducing interest-rate risk exposure. At the same time, however, it appears that in at least some cases, S&Ls engaged in derivative activity without effective internal management controls to assure that such trading was conducted in accordance with sound risk management policies and losses were increased as a result; and in other cases, hedging strategies did not take into account prepayment risk.

To summarize, derivative instruments have been actively traded in this country for approximately 130 years. The primary purpose of these instruments is to manage exposure to price risks, whether through hedging by offsetting the price exposure of a cash position, or through portfolio management techniques. Thus, if used properly, derivative instruments can be an important tool. This requires that users have a full understanding of the risks and benefits involved in their use, particularly in light of the increasingly broad spectrum of derivative instruments and their increasing complexity. As the CFTC's Study reflects, it is also important to distinguish between derivative transactions undertaken in a comprehensively regulated environments, such as futures exchanges, and transactions undertaken pursuant to exemptions from regulation or that are wholly unregu-

lated. As the Study notes, in exempted or unregulated transactions, markets users' individual internal management controls take the place of otherwise applicable regulatory protections to a significant extent and thus are important for the protection of both the individual market user and its counterparty.

QUESTION 5 **a) What are your primary regulatory concerns regarding derivative activities regulated by your agency?**

The Commission's regulatory regime for exchange marketplaces addresses the financial integrity of the market, customer protection, and the efficiency of the market.

The financial integrity of transactions on CFTC-regulated exchange markets is supported by requirements applicable both to intermediaries acting for customers in regulated transactions (FCMs) and to the exchanges on which such transactions are executed. FCMs are subject to minimum capital requirements, financial reporting requirements, and customer funds protections. The integrity of transactions effected on exchange markets is also supported by clearing organizations, which clear, settle and guarantee the performance of obligations to their clearing members. These organizations are subject to the oversight of the CFTC, including review of clearing organization rules. Margin requirements are also a key financial protection. The futures exchanges, in addition to requiring standing margin for each futures contract, also make daily (or even intraday) mark-to-market settlements that distribute all profits and losses accrued each day. Credit risk is thus eliminated from the clearing system on a daily basis.

The CEA and CFTC rules require execution of futures transactions by open outcry or other methods which are open and competi-

tive, and prohibit wash sales, fictitious trades and other abusive trading activities. In addition, the CFTC requires markets subject to regulation to disseminate publicly information on price and volume of transactions and to maintain records of transactions to permit reconstruction of trading and detection of abuses.

Market efficiency concerns are addressed through the review of new products, prohibition of certain trade practices and market surveillance programs. A futures or option contract may not be traded until it has been designated for trading by the CFTC. The designation process includes a review of contract terms and conditions to determine whether trading in the proposed contract would be susceptible to manipulation. In addition to regulations designed to promote market efficiency, the CFTC maintains a market surveillance program to detect possible congestion. Market surveillance is conducted directly, using position reports which all large traders are required to file with the Commission.

b) Do you believe that any fundamental changes in the current regulatory framework for institutions using financial derivatives is needed at this time?

The CFTC Study does not recommend fundamental changes in the current financial regulatory framework for OTC derivatives. However, the Study reviews a number of potential risks of OTC

derivatives activity, considers the nature and extent of the regulation of OTC derivatives activity, and addresses the potential implications of OTC derivatives activity for the markets and intermediaries subject to CFTC regulation and that of other federal regulators in light of the complex relationships between OTC derivatives transactions and regulated markets and intermediaries. Based upon this review, and, in particular, the cross-jurisdictional nature of the potential concerns raised by OTC derivatives activity, the Commission has recommended the establishment of an interagency council to identify common regulatory issues and foster regulatory coordination in this area. In light of the difficulty of obtaining even basic information about OTC derivative transactions, the CFTC Study suggests that an early focus of such coordination might be identification of information gaps and data needs and specifies issues relevant to information access for further review. The CFTC Study also identifies issues relating to pricing, disclosure and risk valuation; internal controls; and clearing facilities for OTC derivatives as agenda items for coordinated review. The Study stresses that an interagency coordinating mechanism such as recommended by the Commission is not intended to take the place of the individual initiatives of the relevant regulators but to supplement those individual efforts in areas of common interest (or where additional authority may be necessary). Specific recommendations are discussed in greater detail in Chapter IV of the CFTC Study.

QUESTION 6 **Is there adequate coordination between U.S. and foreign regulators to regulate risks associated with derivatives? Does the BIS report of April 1993 address all of your agency's concerns in this area?**

To date, the Commission is a party to twenty-one agreements with twelve foreign jurisdictions to cooperate on a range of supervisory and enforcement matters. Moreover, certain of these arrangements specifically address the financial supervision of firms involved in cross-border transactions and facilitate assessments of risks to U.S. futures commission merchants related to their affiliates in other jurisdictions.

Regardless of whether formal arrangements with specific jurisdictions exist, the Commission continues to share information and cooperate on matters intended to ensure the integrity of the financial marketplace for which it has jurisdiction with foreign regulatory and self-regulatory authorities around the world. Forums such as the International Organization of Securities Commissions ("IOSCO"), whose purpose is the development of international consensus on regulatory issues affecting cross-border financial services, provide additional opportunities for regulatory authorities to address matters of current common concern. For example, an October 1992 IOSCO report in which the Commission participated noted that the traditional approach of securities/futures regulation to the prudential regulation of regulated firms should be supplemented through an assessment of

the risks which the rest of the financial conglomerate (in particular, unregulated entities) poses for the regulated securities/futures firm. The report contains eight principles related to the proper supervision of such conglomerates.

Nevertheless, because derivative markets are global, regulators share information related to particular firms subject to their jurisdiction. Currently, an IOSCO working group, of which the Commission is an active participant, is considering issues of regulatory concern in relation to financial institutions active in the derivative markets and matters about which securities regulators need to be concerned in pursuing their regulatory objectives. Although banking supervisors in forums such as the Bank for International Settlements (BIS) have recently published proposals related to addressing derivatives risks for banks, we believe that efforts such as IOSCO's to address issues of specific concern in connection with securities/futures firms active in the derivatives market will add significant value to the current discussion on derivatives risk.

Domestic and foreign regulators agree that there could be improvement in moving toward a common bankruptcy treatment for OTC derivatives and that accounting disclosures for financial instruments should be conformed.

QUESTION 7 **It has been stated that it is not always clear whether a derivatives product is a futures or commodity option contract subject to the jurisdiction of the CFTC, a security subject to regulation by the SEC, or a traditional banking product subject to regulation by the federal banking regulators. Therefore, in many cases, regulatory jurisdiction is often claimed by several of these agencies. Please comment on this issue and on the decisions made by legislators and courts regarding this issue.**

In recent years, marketplace innovations have produced so-called "hybrid" products which, by combining elements of futures contracts or commodity options with debt or bank depository interests, have given rise to questions as to which regulatory framework would apply to the product. As discussed more fully in response to Question 1, the CFTC has undertaken a variety of initiatives to clarify the status of hybrid instruments including, most recently, issuance of revised hybrid rules, effective February 22, 1993, which provide for regulation of hybrid instruments in accordance with the regulatory framework applicable to the dominant component of the instrument. The exemptive authority granted the CFTC under the FTPA assures that it will have the legal tools necessary to address issues that may arise in the future concerning the regulatory status of new forms of hybrid instruments.

QUESTION 8 **Recently published reports on derivative activities, such as the July 1993 Group of Thirty report entitled Derivatives: Practices and Principles and the May 1993 Institute of International Finance, Inc. (IIF) report entitled An Integrated Regulatory Approach to Derivatives Activities stress the importance of internal controls over regulation in many areas. However, the Group of Thirty report has been criticized by some for relying too heavily on industry self-regulation.**

a) Regarding banks, the IIF report states, for example, that banks themselves should develop trading and credit policies that set their own risk limits. Do you think that such maximum risk limits should be set by institutions or by regulators?

The Commission believes that the views of the banking regulators should be given great weight in considering this proposal. However, the Commission's experience in futures market regulation may have some relevance. In the futures industry, three levels of credit policies and risk limits exist. First, private firms establish credit policies and risk limits as part of their ordinary business decisions. For example, futures commission merchants (FCMs) perform credit checks and establish risk (position) limits for their customers. Second, self-regulatory organizations (SROs), such as the exchanges, clearinghouses, and the National Futures Association, enforce through their audit programs capital requirements (a form of credit limit), which must be at least equivalent to those of the Commission and may increase or decrease based upon positions being carried by the FCM for customers. The Commission monitors the activities of SROs to ensure that they perform their monitoring duties. Finally, the

Commission establishes and enforces its own set of capital rules. This three-tier structure has been successful in that it is rare that public customers lose money as the result of the insolvency of a registered FCM.

It is our understanding that the banking regulators' proposals on risk-based capital are intended to address and limit bank risk exposures.

b) In general, to what extent, and in what areas, do you think regulators should rely on internal controls versus regulatory requirements?

Generally, with respect to those entities subject to their regulatory authority, regulatory requirements assume that adequate internal controls exist. For example, the securities and futures capital and reporting rules require, as an adjunct to required certified audits of financial condition of their regulated entities, a report on material inadequacies in the internal controls necessary to maintain adequate capital and required customer funds protections.

c) Do you feel that any of the "Recommendations for Dealers and End-Users" contained in the Group of Thirty report (Recommendations 1-20) should be formally mandated by regulation? Please comment on the different issues addressed in the recommendations with specificity.

The Group of Thirty has provided valuable guidance as to what should be the industry's best practice with respect to the management of OTC derivative risks of the types identified by the

Commission in its report. A primary concern of regulators is that such practices, many of which (such as marking-to-market and separation of functions) are required for regulated entities subject to CFTC jurisdiction, are not universally followed. The Commission has proposed the establishment of an interagency task force to discuss, among other subjects relevant to OTC derivatives activity, how best to encourage internal control practices by unregulated dealers and end-users, which could include whether specific controls should be mandated. The Commission would note that it would favor provisions by regulated entities which encourage non-regulated counterparties to use best internal control practices. The Commission also is cooperating with the SEC in the re-evaluation of relevant capital rule provisions which specifically addresses how best to treat credit risk in regulated entities.

QUESTION 9 **Please comment on the four "Recommendations for Legislators, Regulators, and Supervisors" contained in the July 1993 Group of Thirty report (Recommendations 21-24) as they are relevant to your agency. Please comment on each recommendation separately.**

Although the subjects addressed in proposals 21, 22, and 24 are addressed in greater detail in the CFTC Study, the Commission is pleased to summarize here its views on these issues.

First, with respect to netting (proposal 21), the CFTC has stated that settlement risks can be reduced by properly designed payment netting arrangements. Such netting can be accomplished through a clearinghouse, which reduces settlement system flows because each clearing member makes only a single payment representing its net proprietary obligation and net customer obligation to all other clearing members. No clearinghouse arrangement currently exists for OTC derivatives transactions, although such proposals have been discussed. As the CFTC Study indicates, the Commission believes that OTC clearing arrangements should be further discussed by interested regulators in view of the intermarket interests potentially affected. Separately, the Commission currently has before it certain exemptive petitions relating to reduction of regulatory requirements for certain transactions between specified categories of participants effected and cleared through the facilities of an exchange. These petitions may raise regulatory issues relevant to the clearing of non-conventional exchange products.

With respect to legal and regulatory uncertainties (proposal 22), the CFTC has acted to clarify the legal status of swaps, hybrids and certain energy contracts. With respect to tax treatment (proposal 23), the CFTC has supported addressing the uncertainty engendered by the IRS's interpretation of the Supreme Court's decision in Arkansas Best v. Commissioner, 485 U.S. 212 (1988). (CFTC Study at 139-40).

Finally, with respect to accounting standards (proposal 24), the CFTC has identified accounting standards for disclosure of derivative risk as an area for coordinated regulatory attention. (CFTC Study at 133).

QUESTION 10 **If the July 1993 Group of Thirty "Recommendations for Dealers and End-Users" (Recommendations 1-20) are not implemented by regulation, are there adequate mechanisms in place to ensure that such recommendations will be self-implemented? Concern has arisen regarding whether or not one can depend solely on the forces of managerial responsibility and market discipline as sufficient incentives to motivate firms to incur the implementation costs of the recommendations. Does your agency believe that mechanisms, such as periodic surveys of industry practice, a timetable for implementation, or a monitor of such actions are warranted?**

There can be no assurance that the Group of Thirty "Recommendations for Dealers and End-Users" will be implemented. Of course, the Group of Thirty could itself establish a timetable for adoption of these recommendations and monitor and report on the degree of compliance, steps which it has undertaken in the case of its recommendations for improved settlement procedures in the global securities markets. In part because there may be significant differences among market participants in the extent to which they maintain effective risk management and internal control procedures, the CFTC supports including internal controls on the agenda of the interagency coordinating council recommended in its OTC derivatives report.

QUESTION 11 **Please comment on whether institutions should be required to establish separately-capitalized subsidiaries to conduct derivative activities.**

The SEC has issued for public comment a Concept Release which raises several questions related to whether existing capital requirements should be altered to make OTC derivative business conducted within the regulated broker-dealer (and, as CFTC follows the same requirements, FCMs) less costly. A derivative products company (DPC) is a special-purpose company designed to achieve a credit rating higher than that of its sponsoring company by insulating itself from the credit risk of the sponsor. Such special purpose companies may be more desirable counterparties for credit-risk-averse end-users than the lower-rated sponsor company.[10/] To date, derivative products companies, primarily owned by dealers in securities, all have received triple-A ratings.

Currently, many regulated entities seek to do such business through an unregulated affiliate because (1) it may be possible to obtain a higher credit rating for such entity than a broker-dealer, which generally is rated no higher than "A"; and (2) it is too costly to undertake such business in the broker-dealer. The SEC has also requested comment on whether to establish a

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10/ See generally, CFTC Study, Working Paper 6, Descriptions of Derivative Product Companies.

separate regulatory structure for DPCs. We look forward with interest to the comments on these issues.

In addition, we note that there is some question whether the "separateness" of a DPC entity will be honored in all cases of insolvency and as to the potential consequence of a reduction in the credit rating of such an entity.

QUESTION 12 **a) Do you believe the netting provisions contained in the Bankruptcy Code, FIRREA, and FDICIA should be conformed to a single standard? Do the netting provisions in these statutes adequately cover all situations? If not, what situations do and don't they cover?**

To the extent that the Commission expressed concern with respect to FIRREA and FDICIA, its concern was that they not contravene the existing priorities for the disposition of the property of regulated futures brokers under the Bankruptcy Code and the Commodity Exchange Act. These dispositional priorities protect customer funds for which no insurance system is available. If further changes were to be made, we would continue to be concerned that such priorities not be adversely altered as a result.

b) Please discuss the resolution of derivative contracts in the failure of Drexel Burnham Lambert. How effective were the current legal mechanisms, such as the Bankruptcy Code, in resolving the contracts?

The disposition of derivative transactions of Drexel Burnham Lambert Products Corp., the wholly-owned swaps trading subsidiary of Drexel Burnham Lambert Group, Inc., Drexel Burnham Lambert, Inc., a registered securities broker-dealer, and related Drexel entities are discussed in an appendix to the CFTC's Study, a copy of which has been provided herewith. (See Working Paper 4 at pages 4-24 through 4-29 and pages 4-45 through 4-47).

c) How did the withdrawal of certain uncommitted credit lines and other funding difficulties in 1991 for Salomon Brothers resulting from Government Securities issue effect their ability to meet their derivative obligations?

The reported difficulties of Salomon Brothers related to its activities in the government securities markets in 1991 did not result in any CFTC action for violations of Commission regulations governing futures trading. The firm's compliance with financial requirements, such as segregation of customer funds and maintenance of adequate net capital and projected capacity to meet demands for liquidity, was monitored by the relevant SROs, the New York Stock Exchange and the Chicago Board of Trade. The CFTC was in frequent communication with the firm, the SROs and the SEC during this period.

QUESTION 13 **Recommendations contained in the July 1993 Group of Thirty Report (Recommendation 20) and elsewhere state that until harmonized accounting and disclosure standards are set, certain disclosures should be made by dealers and end-users. Although a disclosure regarding credit risk is recommended, a similar disclosure for market risk is not mentioned. Should a summary measure of market-risk exposure be disclosed? If so, what form should such a measure take?**

Disclosure of market risk to customers (end-users) buying or selling exchange traded futures is an issue of great importance to the CFTC and the Commission has adopted several regulations designed to assure adequate disclosure as to various types of products. For example, Commission Rule 1.55 requires each FCM and introducing broker ("IB") to furnish each customer with a required generic risk disclosure statement and to obtain from each customer a signed acknowledgment that this risk disclosure statement has been received before the customer's account may be opened. This statement expressly indicates that substantial losses can be incurred on futures contracts. Customers who open managed accounts or participate in collective investment vehicles (commodity pools) that trade futures contracts and who do not meet a Commission test for financial capacity and sophistication also must receive specified risk disclosures. All sales of products and interests in investment vehicles regulated by the Commission are subject to anti-fraud provisions.

Separately, FCMs are currently required to mark all positions to market and no unsecured credit risk is permitted under existing capital requirements.

The CFTC Study discusses issues relating to accounting and disclosure for OTC derivatives and recommends that regulators give further consideration to these issues on a coordinated basis.

QUESTION 14 **Please comment on the notion of establishing a clearinghouse offset mechanism for swaps transactions. How would a clearinghouse offset separately effect dealers and end-users? Would either benefit more than the other?**

Exchange traded futures and options are cleared through clearinghouses that are part of or affiliated with the futures exchanges and, like the exchanges, those clearinghouses are subject to CFTC regulation. Because the clearinghouse becomes the buyer to every seller and the seller to every buyer, determinations as to the creditworthiness of individual counterparties are not an aspect of exchange trading. During 1992, over 359 million futures and options transactions were cleared on CFTC-regulated exchanges.

As discussed above, pursuant to exemptive authority granted in the FTPA of 1992, in January 1993, the CFTC issued rules exempting specified categories of swaps from most requirements under the CEA. The CFTC's exemptive provision for swaps does not preclude clearing facilities for swaps. It does, however, require that proposals for multilateral netting facilities, other than those limited to netting of payment flows, be submitted for review by the CFTC. In requiring that multilateral facilities be limited to netting of payments, absent specific exemption, the Commission nonetheless recognized the potential benefits of clearing systems that mutualize risk and that a clearing mechanism for swaps could further the interests of the public as well

as swap participants. The Commission also recognized, however, that the regulatory issues presented by such a facility would depend materially upon the facility's design, such as, for example, the extent to which the construction of such a facility is consistent with the minimum standards for netting systems recommended by the Report of the Committee on Interbank Netting Schemes of the Central Banks of the Group of Ten Countries (Lamfalussy Report).[11/] Therefore, swap clearing mechanisms would be most appropriately evaluated in the context of specific proposals, and the swaps exemptive rule provides that proposals for such systems be submitted to the CFTC for review. Separately, the Commission identified clearing arrangements for OTC derivatives as an area for possible consideration by an interagency coordinating council. (CFTC Study at 135).

11/ Bank for International Settlements, Report of the Committee on Interbank Netting Schemes of the Central Banks of the Group of Ten Countries (November 1990). See also, Basle Committee on Banking Supervision: The Prudential Supervision of Netting, Market Risk and Interest Rate Risk (April 1993).

QUESTION 15 **Are there adequate mechanisms currently in place to protect unsophisticated end-users of derivative products? If not, what are your recommendations?**

As discussed above in the answer to question 1, customer protection is a primary goal of the futures regulatory framework administered by the CFTC. This framework, which includes the CEA and CFTC regulations, among other things requires FCMs to separately account for customer funds; to make specified risk disclosures; to supervise accounts and the personnel soliciting accounts; to keep adequate books and records; and to prevent the use of information about customer accounts to benefit others. In addition to Commission rules, exchange and NFA rules are also directed toward protecting customers. Generally speaking, all firms in the futures industry must be members of NFA, and NFA has adopted rules addressing issues of particular concern to unsophisticated customers, such as advertising, discretionary accounts, and disclosure of commissions, fees and risks.

The CFTC carries out an active program to enforce the provisions of the CEA and the Commission's own regulations. In addition, the CFTC routinely audits exchange and NFA enforcement of their own rules, including those in the sales practice area.

When violations cause customer losses, the CEA and the Commission's regulations provide several forums where aggrieved customers may resolve disputes: federal court; arbitration; and reparations, the CFTC's own specialized forum for the resolution

of customer complaints. Finally, the FTPA authorized the Commission to award restitution of customer losses in administrative cases.

To the extent that the CFTC has exempted transactions in derivatives from this regime, the exemptions have been restricted to transactions between sophisticated and high net worth customers or entities.

QUESTION 16 **What kind of stress test simulations do you recommend to account for the different types of risk which arise as a result of financial derivative activity?**

Stress situations increase the risk of counterparty default and of cash flow disruptions. In designing stress test simulations for derivative activity generally, the experience of the futures exchanges and clearing organizations may provide a helpful frame of reference. The exchanges and clearing houses have instituted several types of simulation analyses. For example, the Chicago Mercantile Exchange ("CME") has developed and shared a portfolio margin model called "Standard Portfolio Analysis of Risk" or "SPAN," that specifically accounts for different types of risk. It is now used by most futures and commodity option exchanges in the U.S. to calculate daily the minimum margin levels required for positions.

SPAN determines margin requirements by performing simulations that estimate the maximum potential one-day portfolio loss that might occur under extreme movements in the underlying contract's price. SPAN does this by creating a risk array of 16 different scenarios of combinations of changes in price and volatility for each position. The model then scans the arrays and selects the largest portfolio loss as the margin requirement. SPAN was recently reviewed by Dr. Paul H. Kupiec of the Board in his paper titled "The Performance of S&P 500 Futures Product

Margins Under the SPAN Margining System", which provides more detail and discusses the degree of protection provided by SPAN.

OTC derivatives are not executed or cleared in a manner comparable to regulated futures transactions. Thus, additional factors must be considered in designing stress test simulations for such products. For example, unlike futures, OTC derivatives generally are not standardized and lack a central clearing organization; stress tests would therefore have to be designed to accommodate more customized products and would need to encompass products for which reference prices may not exist, more markets and volatilities than exchange traded instruments, the individual creditworthiness of multiple customers and the degree of concentration of transactions with particular customers and of types of transactions.

QUESTION 17 **Please comment on your agency's views of the proper use and level of collateral in derivative transactions.**

To the extent that OTC derivative transactions are bilateral, privately negotiated contracts between sophisticated counterparties who have evaluated each others' creditworthiness, collateral for their obligations to each other would be a matter of private negotiation. However, an issue that has been raised by regulators and noted by the Commission in its report is whether existing accounting disclosures are sufficient for counterparties to assess creditworthiness accurately. (See CFTC Study at 117-18, 133).

As noted in response to Question 2, generally the CFTC is not involved in setting or reviewing margin levels except for emergency situations and with regard to margins for stock index futures or options contracts.

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QUESTION 18 **When assessing a counterparty for credit risk, how much relative emphasis should be placed upon factors such as capital, disclosure and credit rating? For example, should a credit rating be a proxy for capital?**

In futures markets, it is unnecessary for a customer to assess the credit of the counterparty to an exchange transaction and, indeed, it is effectively impossible to do so because the specific counterparty is unknown. The clearing organization becomes the buyer to every seller and the seller to every buyer, thereby substituting the credit of the clearing organization for that of any individual counterparty. Credit risk issues relevant to OTC derivatives are discussed in Chapter III of the CFTC Study.

It is common practice for many end-users to rely on a credit rating in making credit determinations. Credit ratings may be easier for certain end-users to rely on than attempting to independently analyze capital.

QUESTION 19 **Are executive decisions regarding derivatives, on average, concentrated in too few individuals in each institution to catch problems in a timely manner? Should the decision-making process, where derivatives are involved, be decentralized to enhance internal controls?**

This question raises important issues concerning the relationship between maintenance of effective internal controls and management expertise. Generally, senior management needs to have expertise sufficient to evaluate the effectiveness of risk control arrangements. The Commission requires effective supervision of employees of regulated firms and of the accounts they handle.

To the extent decentralization of control could bypass managerial review, this would be a concern. Issues relating to internal controls, and the extent to which federal regulators have a role in encouraging sound practices in this area, have been identified by the Commission in the CFTC Study as areas that may benefit from consideration on an interagency basis. (CFTC Study at 134-35).

QUESTION 20 **Do compensation policies currently in place adequately discourage undue risk-taking? For example, if employees benefit financially from risk-taking in a direct manner, how is such risk-taking controlled?**

Issues relating to the relationship between compensation policies and risk-taking have been raised in the context of the potential impact of such policies upon corporate financial decision-making. In the context of futures brokerage activity, trading activity for customer accounts must be specifically authorized or undertaken pursuant to a grant of discretionary trading authority. In the context of commodity trading advisors and commodity pool operators who trade on a discretionary basis for customers, the CFTC requires disclosures about trading methodology, track records and other matters relevant to the trading activities to be undertaken.

The Commission does not prohibit compensation based on performance for regulated trading advisors who must disclose their fees and trading strategies. In the case of compensation policies of end-users who use OTC derivative markets, the concerns may be different than in the case of financial professionals.

QUESTION 21 **What is the level of systemic risk resulting from derivative activities? Do you agree with those who assert that derivative activities are concentrated in too few institutions?**

The CFTC Study discusses a number of potential risks arising from OTC derivatives activity, including risks that originate from the activities of specific firms as well as risks that arise from OTC derivatives activity generally. (CFTC Study, Chapter III). As the report notes, systemic risk is generally defined broadly, to include the risk that a disruption, whether at a firm or a market segment, for example, will cause widespread difficulties at other firms, in other market segments, or in the financial system as a whole. The breadth of this definition, coupled with the inadequacy of available information about the nature and scope of derivatives activity, preclude precise answers about levels of systemic risk. However, the CFTC Study reflects the conclusion that the potential linkages among derivatives, organized exchange markets and underlying cash markets, and the resulting potential risks to regulated markets and intermediaries, raise issues that warrant consideration by federal financial regulators on a coordinated basis.

The Commission discusses risk concentration, market, credit and other potential risks arising from derivatives activities in Chapter III of its Study.

QUESTION 22 **Cash liquidity risk for a firm appears to be of greater concern the greater is a firm's involvement in derivative activities, the greater is its reliance on short-term funding, the lower is its credit standing, and the more restricted is its access to central bank discount or borrowing facilities. Therefore, in contrast to depository institutions who, among other things, have access to the discount window, securities firms may find cash management requirements, such as maintaining margin requirements, arising from large derivative portfolios to be more challenging. Compared to depository institutions, how does the less liquid nature of the security business effect its derivative activities and the risks associated with such activities?**

This question is better answered by banking regulators and by the SEC. However, the CFTC would note that in its experience, banks, due to the long-term nature of their business activities and lending commitments, are not necessarily more liquid than securities firms. As a point of comparison, we note that brokerage firms engaged primarily in exchange traded futures activity are generally more liquid than any other financial services firms. Such firms' obligations to futures customers are fully "secured" by segregated funds so that in most circumstances a "run" on the firm would not affect the ability of the firm to meet customer obligations.

Most brokerage firms, securities as well as futures, are very liquid, as their balance sheets generally consist of items that are short-term, quite marketable, quickly transferable and/or easily offset in a matter of days. In addition, regulato-

ry net capital requirements, which include risk and illiquidity haircuts, tend to encourage liquidity and tend to encourage firms to place illiquid types of business in other entities. Drexel, Burnham, Lambert Inc., the FCM and securities broker-dealer, is a case in point. During the failure of DBL Group, the parent company, the FCM/broker-dealer's business was transferred within a matter of weeks.

However, the speed of the Drexel liquidation might not be matched by all firms engaged in derivative activity, particularly in the case of firms which are involved in off-exchange, unregulated derivative products business. Liquidity in such cases would depend upon the nature of the business engaged in and the specific terms of their contracts with counterparties, including the frequency of cash settlement, degree of leverage employed, cash collateral arrangements (margin), duration of the contracts and the opportunities for offset. Also, the impact of market volatility during the process of liquidation would be an important consideration.

It should also be noted that the use of derivatives may enhance a firm's liquidity. For example, a bank or securities dealer with positions in long-term debt securities can effectively reduce the maturity of such positions by assuming a short T-bond futures position, purchasing a put on a long-term security or entering into an appropriately structured interest-rate swap. Alternatively, a firm generally can obtain a given level of

financial market exposure with less cash through the assumption of a derivatives position than by purchasing securities outright.

QUESTION 23 **Criticism of speculators in the derivative markets, primarily exchange traded derivatives such as currency futures and options, has focused on the alleged ability of such speculators to manipulate markets. Concerns have also arisen as to potential depository institution exposure as a result of speculators' activities. Please comment on these criticisms and whether or not such speculators should be subject to increased regulation or supervision.**

The dollar value of currency futures traded on the CME, the primary U.S. market for foreign exchange futures, totals about $8 billion per day. This represents a mere eight-tenths of one percent of the $1 trillion daily value of currencies traded in the over-the-counter foreign exchange market. Thus, it would be anomalous to suggest that speculators in currency futures traded on U.S. exchanges, even if they held all of the open interest, could use their market positions to manipulate the foreign exchange market. In light of the relative size of the futures markets as compared to the cash markets, it is clear that the futures markets generally reflect the cash market price.

More generally, it is important to recall that speculators perform an important economic function in any free or competitive market; in hedging and risk-shifting markets such as the futures markets, speculators provide needed liquidity by assuming the risks that hedgers seek to shift. Speculative traders thus act, in effect, as intermediaries or bridges between a commercial firm that needs to hedge its price risk at a particular point in time,

and another that needs to hedge an opposite price risk at a later date. Speculators are willing to have this risk transferred to them and thus reduce the uncertainty and risk to the hedger.

Secondly, the regulatory structure for exchange traded futures and options is designed to protect against manipulation of both futures and cash prices. For example, under Sections 5(4) and 5a(12) of the CEA and Rule 1.41, Commission staff review all applications to trade futures and options contracts and any subsequent rule changes to ensure that the terms and conditions serve an economic purpose, conform to commercial practices, provide for adequate deliverable supplies, and are not readily susceptible to manipulation. The Commission has authority to prosecute manipulation or attempted manipulation in civil actions and under section 9(a) of the CEA, manipulation or attempted manipulation is a felony. The Commission maintains a market surveillance program to prevent and detect price manipulation, squeezes, corners, and congestion. Under Rule 1.61, the contract markets have implemented position accountability rules regarding the size of positions held by speculators in the foreign currency futures markets. Commission staff monitor positions held by all large traders, hedgers and speculators alike, using position reports required under Part 17 of the regulations.

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QUESTION 24 **What, if any, effect will the depositor preference provision of the Omnibus Budget Reconciliation Act of 1993 have on the derivatives market?**

To the extent this question addresses the exchange futures markets, the depositor preference provision of the 1993 Omnibus Budget Reconciliation Act will enhance the security of customer funds received by FCMs in connection with commodity futures and option contracts and held on deposit in a bank. The deposit protection afforded customers under this provision also generally supports the overall stability of the banking system.

Insofar as this question addresses the effect of this provision on banks participating in over-the-counter derivatives activity and the relationship between the depositor preference provision with other relevant banking legislation, the Commission defers to the expertise of the agencies responsible for implementing such legislation.

QUESTION 25 **Please provide a list and discussion of CFTC proposals regarding the regulation of derivatives currently under consideration. Also, please provide, to the extent possible, a discussion of the CFTC study currently underway.**

The CFTC Study includes, as noted above, a recommendation for establishment of an interagency task force to explore a number of areas relevant to OTC derivatives activity. The Study recommends a number of specific areas for consideration by such an interagency council, including information access, pricing disclosure and risk valuation issues, internal controls, clearing facilities for swaps and the scope of regulatory oversight in this area, particularly with respect to unregulated dealers in OTC derivatives. The CFTC Study also highlights areas relevant to OTC derivatives activity for further review by the CFTC, including issues relating to clearing facilities for swaps, rules to facilitate risk assessment with respect to affiliates of FCMs, review of Treasury Amendment issues, and review of the Department of Treasury's proposed regulations concerning the tax treatment of business hedges.

The Commission appreciates the opportunity to comment on these issues.

Sincerely yours,

Sheila C. Bair

Financial Derivatives

Part Two

A Review of Industry Practices, Risks, and Regulation

A Report Prepared By

House Banking Committee
Minority Staff

November 1993

Anthony F. Cole, Staff Director

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PART TWO: A REVIEW OF INDUSTRY PRACTICES, RISKS, AND REGULATION

Part Two of the Minority Staff report provides detailed background information on the derivative markets and the current policy issues relating to derivatives. The information provided in Part Two is based on the Minority Staff's meetings with practitioners, the responses by the regulators to Representative Leach's questions, and research sources referenced at the end of this section.

SECTION I -- INDUSTRY PRACTICES, RISKS, AND REGULATION

A. GENERAL INFORMATION ON THE FINANCIAL DERIVATIVE MARKETS

1. OVERVIEW

In general terms, a derivative instrument is a contract whose value depends on, or "derives" from, the value of an underlying asset, rate or index. Derivatives allow end-users, such as banks and corporations, to manage risks, enhance liquidity, save costs on debt issuance, and manage assets and liabilities in a more efficient and cost-effective manner. Derivatives are not traditional investments or borrowing vehicles. Derivatives can either be customized agreements between two counterparties (over-the-counter derivatives (OTC)), or standardized and traded on organized exchanges (exchange-traded). In practice, OTC derivatives are not available to the general public and are instead utilized by institutions. Individuals may purchase and sell exchange-traded derivatives, namely futures and options, through a broker, and individuals such as farmers utilize commodity futures and options. However, the exchange-traded derivative markets are dominated by sophisticated players. Individuals may also be involved with derivatives through mutual or other funds which utilize derivatives or invest in securities with embedded derivative features. Derivative transactions are not a zero-sum-game in that both parties in a derivative transaction may benefit from the transaction. Industry practitioners uniformly maintain that speculation using derivatives does exist, but is a smaller portion of the overall activity and risk. Due to the dynamic nature of market development and technological advances, however, constant supervisory attention to derivative activities must be maintained.

Dealers of derivatives, primarily banks and securities firms, cater to the needs of end-users by making markets in derivatives, and, in turn, earn spreads and returns on their own positions. A vast majority of the derivative transactions between a dealer and an end-user customer are "customer-driven" in that they are entered into for the purpose of reducing risk to the customer's business.

It is important to note that despite a common perception, the primary function of derivatives for end-user financial institutions and corporations is to hedge those risks which are, by nature, an integral part of their business. According to the OCC: "Financial derivative transactions currently represent a relatively small portion of the total credit, market, liquidity, and operational risk to which most banks are routinely

exposed."[1] Derivatives have fundamentally changed financial management by providing new tools to manage risk. Through derivatives, the complex risks that are bound together in traditional instruments can be separated and managed independently, and often more efficiently. Yet many, both inside and outside of the financial industry, remain uncomfortable with derivative activities. For example, in a 1992 speech to the New York State Bankers Association,[2] E. Gerald Corrigan, then-President of the Federal Reserve Bank of New York, warned that the growth and complexity of derivative activities "should give us all cause for concern." And in April 1993, investor Warren Buffett stated that derivatives might one day trigger a catastrophic "chain reaction" in world financial markets.

The size of the derivative markets is often expressed in a "notional amount". The notional principal amount is not owed by either counterparty, as it would be in a loan. Instead, the notional amount is a base amount which is used to calculate payments. (For example, one payment may equal 7% of $100 million, where $100 million is the notional amount.) Therefore, the size of the derivative markets, and the money at risk, is only a small fraction of the notional amount.[3] Currently, the risks associated with derivatives are accounted for in bank and thrift capital standards by assessing the current credit risk exposure plus an add-on for future exposure based upon 0-5% of the notional amount. The current credit exposure (due to the risk that a counterparty will default) is measured as "replacement cost" which is the cost to an institution to replace a contract on which a counterparty has defaulted. The replacement cost plus the add-on is referred to as the "credit equivalent amount" which is then multiplied by up to 50% to arrive at the risk-based capital charge. According to Federal Reserve data, the credit exposure (replacement cost) of derivative contracts reported by banking institutions was 1.4% of the notional amount as of June 30, 1993.[4] In addition, the amount of counterparty credit risk associated with derivatives is decreased if the counterparties enter into legally enforceable netting agreements.[5] As off-balance sheet items, derivatives may be used by institutions to increase their leverage and some argue may be used to evade capital standards. Since the implementation of tougher capital standards in 1989, the use of derivatives has grown dramatically.[6]

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[1] "Risk Management of Financial Derivatives," Banking Circular (BC-277), Office of the Comptroller of the Currency (OCC), October 27, 1993.

[2] January 30, 1992 untitled speech given by President Corrigan before the midwinter meeting of the New York State Bankers Association.

[3] According to a Joint report issued by the FED, FDIC, and OCC (Joint Study conducted in response to questions posed by Senator Riegle on derivative products entitled Derivative Product Activities of Commercial Banks dated January 27, 1993), "the notional value of a derivative contract is not a useful measure of credit exposure. That exposure generally amounts to only a small fraction, say 2-3%, of the notional amount." Furthermore, according to the FDIC: "portrayal [of the derivatives markets] as a multitrillion dollar market is somewhat deceptive, both in terms of activity and actual dollars at risk. This principally is the result of the manner in which most of these contracts are constructed. Derivative instruments are assembled in terms of notional principal amounts ... which simply facilitate the calculation of the future cash flows. Different types of derivative instruments have different notional principal amounts which have little bearing on the actual potential for price movements and changes in cash flows."

[4] See also **Chart 13 in Section B.1.a.: Measuring Credit Exposure.**

[5] Netting is an agreed offsetting of positions and obligations by the counterparties involved in more than one transaction. (Counterparty A owes counterparty B only that amount equal to counterparty A's total payments due to counterparty B minus counterparty B's total payments due to counterparty A.) Netting may take several forms which have varying degrees of legal enforceability in the event of default of one of the parties. The enforceability of netting is currently being studied and is discussed in **Section B.6.e.:Legality/Enforceability of Derivative Transactions.** For example, the gross credit exposure due to derivatives at the 50 largest bank holding companies at the end of 1992 was 2.3% of the notional amount, while the net credit exposure was 1.46% of the notional amount. See **Chart 13 in Section B.1.a.: Measuring Credit Exposure.**

[6] The direct cause and effect relationship between the capital standards and the increased use of derivatives is not definitive.

2. THE FINANCIAL DERIVATIVE MARKETS

Derivatives are entered into throughout the world through two different markets: 1) the Over-the-Counter (OTC) Market; and 2) the Exchange Market.

The OTC derivative market handles those derivatives which are customized to meet the specific terms and conditions of institutions. OTC derivatives fall outside of the jurisdiction of the CFTC or have been exempted by the CFTC from its jurisdiction. In addition, any derivative considered a security would fall under the jurisdiction of the SEC. Authoritative supervision over these derivatives is accounted for primarily by regulatory constraints over the institutions which deal or use OTC derivatives. Certain OTC derivatives are subject to certain anti-fraud and anti-manipulation rules of the CFTC and the SEC.

The Exchange market handles those derivatives which are standardized and are traded on organized exchanges. Such exchange-traded derivatives are regulated by the CFTC[7] and the SEC, in accordance with the respective products and exchanges they regulate.

a. Over-the-Counter Market (OTC)

OTC derivatives are custom tailored to fit the particular needs of a party of the transaction and often specify instruments and maturities that are not offered on any exchange. OTC derivatives include all swaps, most forwards, no futures, and some options. In practice, OTC derivatives are not available to the general public, as are bonds and stocks in the cash markets, and are instead utilized by institutions. Individuals may be involved with derivatives through mutual or other funds which utilize derivatives or invest in securities with embedded derivative features.

Parties negotiate the details of OTC transactions or agree to certain simplifying market conventions. Typically, institutions enter into a customized transaction with a dealer. The dealer typically enters into a subsequent opposite, or offsetting, transaction with another institution with different needs. Most parties who enter into OTC derivative contracts have been assigned high credit ratings, and if not, are often required to post collateral. OTC derivatives are not under the jurisdiction of the CFTC or have been exempted by the CFTC from its jurisdiction. OTC contracts are not traded on organized exchanges and are not subject to clearinghouse offset. Therefore, the liquidity of OTC derivatives is low compared to exchange-traded derivatives and cash market instruments (bonds and stocks).

OTC derivatives are primarily designed to reconfigure, or hedge against, market risk rather than to provide liquidity. OTC derivatives may, to a much lesser extent, be used for trading (as an OTC derivative could be subsequently "assigned" to another party). According to market participants, OTC derivatives are not, for all practical purposes, often used for trading or speculation as there exist instruments better suited for such purposes (OTC derivatives are customized and relatively illiquid). A

[7] The CFTC has jurisdiction over certain derivatives as they are considered financial commodities.

"speculative" position using an OTC derivative could arise, however, if a dealer, such as a money center bank, were to enter into an OTC transaction with a customer and not enter into a subsequent offsetting transaction or a perfectly matched offsetting transaction. In general, if a firm enters into an OTC transaction without hedging a corresponding asset or liability, the firm creates a position for the life of the transaction.

b. Exchange Market

Exchange-traded derivatives are standardized as to maturity, size, and delivery terms and are traded on organized exchanges. The exchanges act as clearinghouses, or counterparties, in each transaction. This reduces the credit risk related to the derivative transaction (risk that a counterparty to a transaction will default). The exchange requires the posting of collateral known as margin for all futures transactions and for the sale of all options transactions.[8] The virtues of a clearinghouse include the ability of participants to close out a position simply by undertaking an opposite trade. Standardization and the clearinghouse feature limit transaction costs and foster high degrees of liquidity. The primary economic function of exchange-traded derivatives appears to be the provision of liquidity.

When entering into a futures transaction or selling an option, counterparties must post an initial margin requirement with the exchange. At the end of each day, the position must be marked to market with gains or losses added to or subtracted from the counterparties' margin accounts. The balance in a margin account cannot fall below the maintenance margin, which typically corresponds to a contract's maximum allowable daily price movement. Should the position fall below the maintenance margin, the counterparty must put up additional collateral known as variation margin. On the other hand, if the position increases in value, the counterparty may withdraw the excess margin. For traders that have positions in a variety of futures and cash instruments, margin can be determined on a portfolio basis.

All commodities, including all futures and most options, which are traded on organized contract markets are under the jurisdiction of the CFTC. The CFTC polices matters of information and disclosure, fair trading practices, registration of firms and individuals, protection of customer funds, record keeping, and the maintenance of orderly futures and options markets. The stock exchanges and the derivatives which trade on such exchanges are regulated by the Securities and Exchange Commission (SEC).

Stocks, bonds, subscription rights, subscription warrants and, in some cases, options are traded on 9 stock exchanges in the United States. The futures market is represented by 13 leading commodities exchanges.

The organized exchanges in the U.S. which list futures and options contracts include those listed below. International exchanges include the London International Financial Futures Exchange (LIFFE), the Marche a Terme International de France

[8] Under the Futures Trading Practices Act of 1992, the FED may request or direct the contract market to set margin levels "appropriate to preserve the financial integrity of the contract market or its clearing house or to prevent systemic risk". On March 22, 1993, the FED delegated its stock index margin authority under the Act to the CFTC.

(MATIF), the Deutsche Terminborse (DTB), the Tokyo International Financial Futures Exchange (TIFFE), the Sydney Futures Exchange (SFE) and the Singapore Mercantile Exchange (SIMEX).

The specific exchange-traded derivatives traded on the U.S. exchanges include:[9]

American Stock Exchange (AMEX) (New York): Index Options: Computer Technology Index, Institutional Index, Major Market Index, Oil Index. Interest Rate Options: U.S. Treasury bills, U.S. Treasury notes.

Amex Commodities Corporation (New York): Options: gold bullion.

Chicago Board of Trade (CBOT): Futures: corn, gold, Government National Mortgage Assoc. mortgages, Major Market Index, Major Market Index "MAXI," Municipal Bond Index, NASDAQ-100 Index, oats, silver, soybeans, soybean meal, soybean oil, U.S. Treasury bonds, U.S. Treasury notes, wheat. Futures options: corn, silver, soybeans, U.S. Treasury bonds, U.S. Treasury notes.

Chicago Board Options Exchange (COE): Foreign Currency Options: British pound, Canadian dollar, Deutsche mark, French franc, Japanese yen, Swiss franc. Index Options: Standard & Poor's 100 Index, Standard & Poor's 500 Index, Standard & Poor's Over The Counter 250 Index. Interest rate options: U.S. Treasury bonds, U.S. Treasury notes.

Chicago Mercantile Exchange (CME): Futures: feeder cattle, live cattle, live hogs, lumber, Over The Counter 250 Industrial Stock Price Index, pork bellies, Standard & Poor's 100 Index, Standard & Poor's 500 Index. Futures options: British pound, Deutsche mark, Eurodollars, live cattle, live hogs, Standard & Poor's 500 Stock Index, Swiss franc.

Chicago Rice and Cotton Exchange (CRCE): Futures: rough rice, short staple cotton.

Coffee, Sugar & Cocoa Exchange, Inc. (CSCE) (New York): Futures: cocoa, coffee, consumer price index-wages, sugar number 11, sugar number 14. Futures options: cocoa, coffee, sugar.

Commodity Exchange, Inc. (COMEX) (New York): Futures: aluminum, copper, gold, silver. Futures options: copper, gold, silver.

International Monetary Market (IMM) at the Chicago Mercantile Exchange (Chicago): Futures: bank certificates of deposit, British pound, Canadian dollar, Deutsche mark, Eurodollar, European Currency Unit, French franc, gold, Japanese yen, Swiss franc, U.S. Treasury bills.

Kansas City Board of Trade (KCBT): Futures: Value Line Maxi Index, Value Line Mini Index, wheat. Futures options: wheat.

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[9] Downs, John, and Goodman, Jordan Elliot, "Dictionary of Finance and Investment Terms," Barron's Financial Guides, 1987.

MidAmerica Commodity Exchange (MCE) (Chicago): Futures: British pound, Canadian dollar, copper, corn, Deutsche mark, gold, Japanese yen, live cattle, live hogs, oats, platinum, silver, soybeans, soybean meal, Swiss franc, U.S. Treasury bills, U.S. Treasury bonds, wheat. Futures options: gold, soybean, wheat.

Minneapolis Grain Exchange (MGE): Futures: high fructose corn syrup, spring wheat, white wheat. Futures options: spring wheat.

National Association of Securities Dealers Quotation System (NASDAQ): Index Option: NASDAQ 100 index.

New York Cotton Exchange (NYCE): Futures: cotton, orange juice, propane. Futures options: cotton, orange juice, FINEX (a division of the Cotton Exchange), European Currency Unit futures, U.S. dollar futures, U.S. dollar futures options.

New York Futures Exchange (NYFE) (division of the New York Stock Exchange): Futures: Commodity Research Bureau Futures Price Index, New York Stock Exchange Composite Index. Futures options: New York Stock Exchange Composite Index.

New York Mercantile Exchange (NYME): Futures: crude oil, gasoline (leaded and unleaded), no. 2 heating oil, palladium, platinum, potatoes. Futures options: crude oil.

New York Stock Exchange (NYSE): Index Options: New York Stock Exchange Beta Index, New York Stock Exchange Options Index.

Pacific Stock Exchange (PSE) (San Francisco): Index Options: Technology Index.

Philadelphia Stock Exchange: Foreign Currency Futures: Australian dollar, British pound, Canadian dollar, Deutsche mark, European Currency Unit, French franc, Japanese yen, Swiss franc. Foreign currency options: Australian dollar, British pound, Canadian dollar, Deutsche mark, European Currency Unit, French franc, Japanese yen, Swiss franc. Futures: National Over-The-Counter Index Futures (Philadelphia Board of Trade). Index options: Gold/Silver Index, National OTC Index, Value Line Composite Index. Interest rate options: Eurodollar deposits, European Currency Unit.

3. DEFINITIONS AND PURPOSES OF DERIVATIVES

The following discussion includes definitions of the most common derivative instruments, as well as some basic examples.[10]

A derivative instrument is a contract whose value depends on, or "derives" from, the value of an underlying instrument. Such underlying instruments include interest rates, currency exchange rates, commodity prices, equity (stock) prices, and other indices. Derivative instruments consist of privately-negotiated, customized contracts, referred to as over-the-counter (OTC) contracts, as well as standardized contracts, referred to as exchange-traded contracts, which are actively traded on organized exchanges.

The term "derivative" is also used by some to refer to a wide variety of structured securities and deposits, stripped securities, mortgage-back securities, collateralized mortgage obligations (CMOs), repurchase agreements, and securities with option characteristics.[11] However, these instruments will not be the focus of this report. Instead, this report will focus on those financial contracts whose primary purpose is to transfer price risks associated with fluctuations in asset values rather than to borrow and lend funds.

Derivative contracts which are the subject of this report can be divided into categories based on the nature of the underlying instrument that determines the contract's value. Most derivative contracts fall into one of the following four categories:

- Interest Rate Contracts;
- Currency (Foreign Exchange) Contracts;
- Commodity Contracts;
- Equity Contracts.

While the above four types of contracts have complex structures, each of them can be divided into the basic building blocks of:

- Forward-Based (OTC)/Future-Based (Exchange-Traded) Derivatives;
- Option-Based Derivatives;
- or a combination thereof.

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[10] More examples based on real-life institutions are included in Section A.4.b.: End-Users. A more detailed glossary describing additional derivative instruments is also contained at the end of this report in Appendix I.

[11] A stripped security (or Separate Trading of Registered Principal of Securities or STRIP) is a zero coupon instrument derived from selected long-term notes and bonds. At a bondholder's request, the FED, as the U.S. Treasury's agent, will separate a designated security into its individual coupon components and principal payment. The pieces may be traded separately and must be maintained on the Treasury's book-entry system. A mortgage-backed security is a security backed by mortgages in which investors received payments out of the interest and principal on the underlying mortgages. Such securities are issued by, among others, the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac), and the Government National Mortgage Association (Ginnie Mae or GNMA). A collateralized mortgage obligation (CMO) is a mortgage-backed bond that separates mortgage pools into different maturity classes, called tranches. Income from payments (principal and interest) on mortgages is paid to CMO investors in the specific order that the CMOs pay out. A repurchase agreement (REPO) is an agreement between a seller and a buyer, usually of U.S. Government securities, whereby the seller agrees to repurchase the securities at an agreed upon price and, usually, at a stated time. In the case of a reverse repurchase agreement, the transaction is reversed. REPOs are used regularly by dealers to finance their inventories of securities on a short-term basis.

A forward-based/future-based derivative is a contract which obligates each counterparty to enter into a specific derivative transaction on a certain date. An option-based derivative gives the counterparty who purchased the derivative a right but not the obligation to enter into a specific transaction on or before a certain date. The discussion on swaps, a type of forward-based derivative, will be the most extensive, as it is the most widely used derivative among all types of financial institutions.

Various derivative instruments carry different types and levels of risks. For example, a credit rating agency, Standard & Poors (S&P), ranks the various derivative product types by volatility.[12]

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[12] The S&P rankings of the risks associated with various derivative instruments is based primarily on volatility and is therefore only a "broad-brush" approach. The rankings do, however, give some indication of how high the exposure to credit risk (risk that a counterparty will default) may be relative to notional amounts of these products. (According to S&P, these rankings are based on a "black box" method rather than being mathematically derived from calculations of volatility in underlying rates.) The maximum potential market value (MPMV), the amount it would cost for a firm to replace a contract if a counterparty defaulted, is calculated by S&P by multiplying the notional amount of the contract by the following percentage factors (the higher the percentage factor, the higher the volatility and potential risk.):

- 15% Commodity and equity contracts;
- 10% Currency swaps;
- 4% Currency options;
- 3% Currency futures and forwards;
- 2.5% Interest rate swaps;
- 2% Interest rate options;
- 0.3% Interest rate futures and options.

For a complete discussion of the S&P assessment of derivative instruments, see Azarchs, Tanya, "Banks Face Manageable Risks in Derivative Businesses," CreditWeek, Standards and Poor's Corporation, November 1992. A discussion of the assessment of derivatives by credit rating agencies is contained in Section B.9.: Credit Rating Agency Assessment of Derivative Risks. A discussion of the risks associated with derivative products is contained in Section B: Risks Arising from and Risk Management of Derivative Product Transactions.

The discussion of derivatives is organized in the following way:[13]

CLASSIFICATION OF DERIVATIVES

a. FORWARD-BASED (OVER-THE COUNTER or OTC)/FUTURE-BASED (EXCHANGE-TRADED) DERIVATIVES

(1) Forward-Based Derivatives (OTC) include:

(a) Swaps:
(i) Interest Rate Swaps;
(ii) Currency Swaps;
(iii) Commodity Swaps;
(iv) Equity Swaps;

(b) Forwards:
(i) Forward Rate Agreements;
(ii) Forward Foreign Exchange Contracts;
(iii) Forward Commodity Contracts;
(iv) Forward Equity Contracts.

(2) Future-Based Derivatives (Exchange-Traded) include:

(a) Futures:
(i) Interest Rate Futures;
(ii) Currency Futures;
(iii) Commodity Futures;
(iv) Equity Futures.

b. OPTION-BASED DERIVATIVES (BOTH OTC AND EXCHANGE-TRADED)

(1) Option-Based Derivatives include:

(a) Primary Types of Options:
(i) Interest Rate Options;
a) Caps (just OTC)
b) Floors (just OTC)
c) Collars (just OTC);
(ii) Currency Options;
(iii) Commodity Options;
(iv) Equity Options.

(b) Other Types of Options:
(i) Swap Options (or Swaptions) (just OTC);
(ii) Embedded Options;
(iii) Average Rate Options;
(iv) Barrier Options;
(v) Lookback Options;
(vi) Compound Options.

[13] It is important to note that under the Commodity Exchange Act, certain interest rate instruments, currency instruments, equity instruments, and commodity instruments are all considered a type of financial commodity.

a. Forward-Based (OTC)/Future-Based (Exchange-Traded) Derivatives

Forward-based/future-based derivatives are contracts which obligate each counterparty to enter into a specific derivative transaction on a certain date.

Forward-based derivatives are customized with terms and conditions tailored to fit the particular business or risk management objectives of the counterparties. Negotiations take place with respect to contract size, delivery dates, credit terms, etc. Forward-based derivatives, in other words, are not standardized and are therefore typically considered over-the-counter (OTC) contracts as they are not arranged through organized exchanges. Forward-based derivatives include swaps and forwards. Pursuant to its exemptive authority, the CFTC exempted swaps, hybrids, and certain energy products from its jurisdiction.[14] The Commodity Exchange Act (CEA) excludes forwards from CFTC jurisdiction.[15]

Future-based derivatives are similar to forward-based derivatives, but the terms of a future-based derivative are standardized. Future-based derivatives are arranged through organized exchanges (exchanged-traded). Future-based derivatives include interest-rate futures, currency futures, commodity futures, and equity futures. The CEA gives the CFTC jurisdiction over future-based derivatives.[16]

The change in the value of a forward-based/future-based derivative is roughly proportional to the change in the value of its underlying instrument.

See Chart 1 on next page for the payoff profile, or the value, of a forward-based derivative.[17]

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[14] Regarding swaps and hybrids, see: Section 4(c)(1) of the Futures Trading Practices Act of 1992, 7 USC §6(c)(1). Regarding swaps, see Section 4(c)(5)(B) of the Futures Trading Practices Act of 1992, and 58 Fed. Reg. 5587 (January 22, 1993). Regarding hybrids, see Section 4(c)(5)(A) of the Futures Trading Practices Act of 1992, and 58 Fed. Reg. 5580 (January 22, 1993). Regarding energy contracts, see 58 Fed. Reg. 21286, 21294 (April 20, 1993). In addition, the CFTC has retained some residual anti-manipulation or anti-fraud authority for some of these exempt instruments.

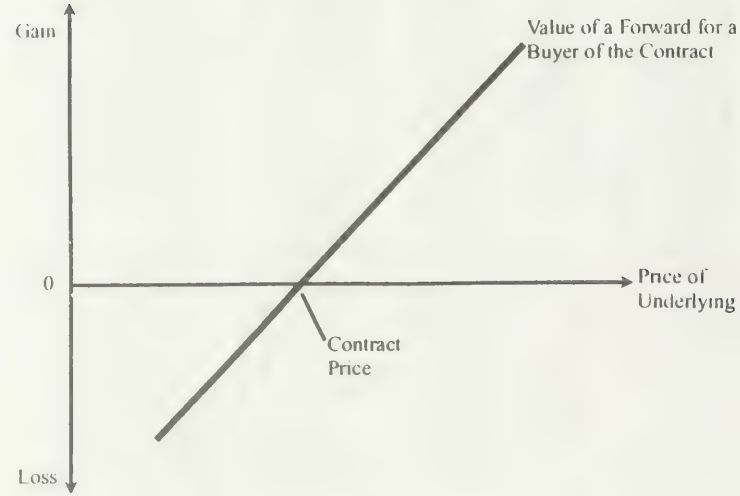
[15] Regarding forwards, see Sec. 1a(11) of the CEA, 7 USC §1. Regarding those transactions in the interbank market, see 7 USC §2. Also regarding interbank market, see 50 Fed. Reg. 42963 (Oct. 23, 1987).

[16] Specifically, Section 2(a)(1)(A)(i) of the Commodity Exchange Act grants to the Commission exclusive jurisdiction over "accounts, agreements (including any transaction which is of the character of, or is commonly known to the trade as, an 'option,'...), and transactions involving contracts of sale of a commodity for future delivery ..." 7 USC §2.

[17] Chart Source: Group of Thirty, Derivatives: Practices and Principles, Washington, D.C., July 1993.

Chart 1

Value of a Forward Contract



The value of a forward contract is conveyed at contract maturity through delivery or cash settlement. If, at maturity, the price of the underlying is higher than the contract price, then the buyer makes a profit. If the price is lower, the buyer suffers a loss. The gain to the buyer equals the loss to the seller.

(1) Forward-Based Derivatives

(a) Swaps

As the name implies, a swap is a contract between two parties to exchange, or "swap", a stream of cash flows under an agreed-upon set of terms. Swaps are not investments or borrowings. Swaps allow each counterparty to transform their existing cash flow into a more desirable cash flow, therefore benefiting both counterparties. Depending upon the type of underlying instrument, the vast majority of swap contracts are classified into: (i) Interest Rate Swaps; (ii) Currency Swaps; (iii) Commodity Swaps; and (iv) Equity Swaps. Pursuant to its exemptive authority, the CFTC exempted swaps, hybrids, and certain energy products from its jurisdiction.

Swaps are bilateral agreements between institutional participants, and are not available to the general public. Swaps are not readily tradable in the ordinary sense of the word. Pursuant to its exemptive authority, the CFTC exempted swaps from its jurisdiction.[18] Swaps, therefore, are customized over-the-counter (OTC) contracts. Swaps are entered into through private negotiations and are tailored to meet the specific risk management needs of the counterparties. The cash flows from a swap can be decomposed into equivalent cash flows from a bundle of separate forward contracts.[19] A party may unwind a swap by writing a second swap with an identical notional amount, payment dates, and maturity dates, and with similar interest rate calculations at the new current rates and on a reverse basis.

Although swaps are OTC instruments, there is a degree of standardization in the contracts through the development of a master agreement by the International Swaps and Derivatives Association (formerly the International Swaps Dealers Association) or ISDA. Counterparties often enter into the master swap agreement that establishes the terms of a swap agreement. Master agreements often incorporate the ISDA Code of Standard Wording, Assumptions, and Provisions for Swaps to provide basic wording and assumptions. Counterparties can change the master agreement as required.[20]

With the exception of currency swaps, a hypothetical "notional" amount is used to calculate the payment streams. The notional amount is used for calculation purposes only and is not exchanged or owed by either counterparty. (For example, in a swap, Counterparty A may pay 6% of $100 million to Counterparty B, and Counterparty B may pay the floating rate LIBOR of $100 million to Counterparty A. The notional amount, the $100 million is not exchanged or owed.) The notional amount is essentially based upon the amount of assets and liabilities the Counterparties wish to hedge. Interim payments on a swap are generally netted, with the difference being paid by one party to the other.

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[18] On January 22, 1993 the CFTC published final rules exempting swap transactions meeting certain criteria from Commodity Exchange Act regulation. 12 CFR 35.1(b)(2) as added by 58 Fed. Reg. 5587

[19] The discussion of forward contracts follows this discussion on swaps. Forward contracts generally obligate one counterparty to buy, and the other to sell, a specific underlying instrument at a specific price, amount, and date for delivery in the future. Customarily, there is no money settlement at the beginning of the forward contract or during the lifetime of the contract, but only on the maturity date.

[20] Master agreements will be discussed in Section B.I.b.(2): Documentation.

In principle and increasingly in practice, swaps allow any kind of payment stream to be "swapped" into any other type of payment stream with equal estimated current value. Swaps pricing brings certainty and simplicity to the evaluation of the wide range of payment alternatives facing institutions. Without derivative instruments, institutions would have to buy and sell instruments in the cash markets (such as the U.S. Treasury market, the corporate bond market, and the stock market) in order to alter their payment streams to benefit their institution. In practice, however, the transaction costs of buying and selling purely in the cash markets may be daunting and the liquidity and credit risks involved may not be acceptable. Indeed, the quality of the cash markets varies widely from one instrument to another and also across countries and currencies. (For example, those who invest in U.S. Treasuries may move in and out of the market quickly, thereby enjoying great liquidity, but private-placement investors rarely enjoy comparable liquidity.)

Swaps are used by depository institutions, sovereigns, corporations, insurance companies, and institutional investors to, among other things, manage interest rate risk, reduce borrowing costs, and enhance returns on assets. For example, large users of interest rate swaps include Government-Sponsored Enterprises (GSEs) namely Fannie Mae, Freddie Mac, Sallie Mae, and Ginnie Mae.[22] Financial institutions and other businesses have found an increasing need to alter their exposure to price and interest rate movements both quickly and inexpensively in response to the rapidly changing global markets. The general increase in corporate leverage over the past 10 years has also resulted in additional swap and derivative product use to manage funding risks associated with longer-term maturities. Swaps can also be used to create a synthetic security and, to a lesser extent, for trading (as the OTC swap contract could be subsequently "assigned" to another party). According to market participants, swaps are not, for all practical purposes, used for trading or speculation as there exist instruments better suited for such purposes (swaps are customized and thus relatively illiquid). A "speculative" position using a swap could arise, however, if a dealer, such as a money center bank, were to enter into a swap with a customer and not enter into a subsequent offsetting swap or perfectly matched offsetting swap. In general, if a firm enters into a swap without hedging a corresponding asset or liability, the firm creates a position for the life of the swap.

In general, swaps have increasingly tied together the currency and money markets at all maturities and have eroded price discrepancies bred by differences in liquidity and credit standing across markets. Swaps can be divided into:

(i) Interest Rate Swaps;
(ii) Currency Swaps;
(iii) Commodity Swaps; and
(iv) Equity Swaps.

[22] Federal National Mortgage Association (Fannie Mae), Federal Home Loan Mortgage Corporation (Freddie Mac), Student Loan Marketing Association (Sallie Mae), and Government National Mortgage Association (Ginnie Mae or GNMA).

(i) Interest Rate Swaps

An interest rate swap is one in which two counterparties exchange interest payment streams of differing character, e.g., exchange fixed for floating interest payments according to predetermined rules, but there is no exchange of principal. Fixed for floating interest rate swaps make up 90% of the interest rate swap activity. The amount of payments owed by each counterparty are calculated by applying the interest rates to a hypothetical "notional" amount, for example 7% of $100 million, but the notional amount, the $100 million, is not exchanged or owed by either counterparty, as it is in the case of a loan. The notional amount is essentially based upon the amount of assets and liabilities the counterparties wish to hedge. The floating rate used in such transactions is often the London Interbank Offered Rate or "LIBOR", but other rates, such as a U.S. commercial paper rate, a money market rate, or a U.S. Treasury bill rate, are increasingly being used. Payments are exchanged on a net basis. A type of interest rate swap called a basis swap involves the exchange of floating for floating interest payments, where the floating rates are different, for example the three-month LIBOR rate against the U.S. commercial paper composite rate.

The following is a basic example of how two banks both benefit by entering into an interest rate swap contract with one another.

Interest Rate Swap Example Described Below

(See Diagram 1 on next page)

A basic example of the use of a fixed for floating interest rate swap between Bank A and Bank B is as follows. If Bank A is receiving, in its normal course of business, a majority of its income from fixed rate interest payments on loans (assets) it has made to customers, but is paying a majority of its obligations in floating rate payments on money (liabilities) it has borrowed, Bank A is vulnerable to a rise in interest rates. Bank A is vulnerable to a rise in interest rates because as interest rates rise, the floating interest rate it is paying on its liabilities will rise, while the fixed interest rate it is receiving on its assets will remain the same. Subsequently, the profits of Bank A will decrease as interest rates rise. And if interest rates rise to a point where the interest rate Bank A is paying on its liabilities exceeds the interest rate it is receiving on its assets, Bank A may lose money. (This is what happened to many S&Ls in the late 1970s and early 1980s.)

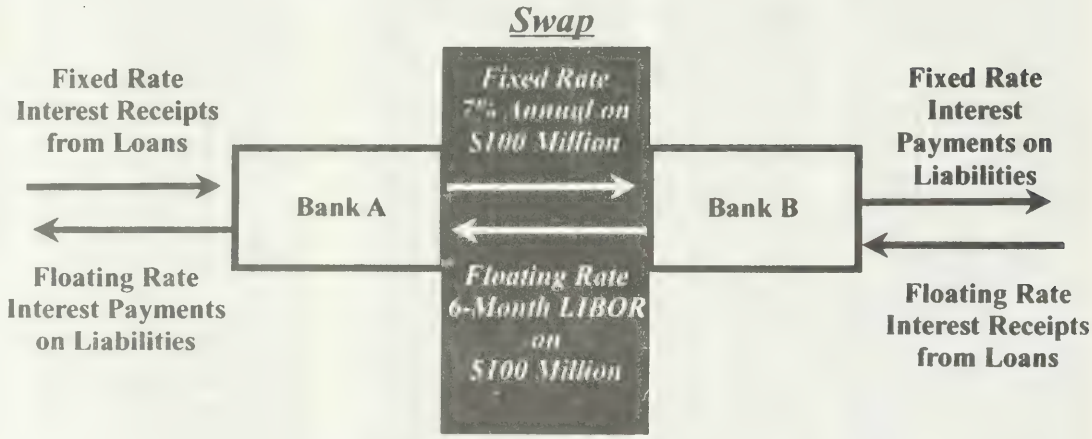
In this case, Bank A may wish to effectively increase the percentage of floating rate asset payments it receives while increasing the percentage of fixed rate liability payments it makes by entering into an interest rate swap. After the swap, Bank A would be more closely "matched" because a certain portion of its payments on both its assets and liabilities would be based on a floating rate; therefore, if interest rates rise, not only would Bank A be paying a higher rate on its floating rate liabilities, but also it would be receiving a higher rate on its floating rate assets, therefore decreasing its vulnerability to rising interest rates. (The other portion of Bank A's payments on both its assets and liabilities would be more closely matched on a fixed rate basis.) Bank B may have the opposite problem where a majority of its assets are based on a floating rate while a majority of its liabilities are based on a fixed rate, therefore making it vulnerable to falling interest rates. Therefore, Bank B may wish to enter into a swap in order to increase the percentage fixed rate asset payments it receives while increasing the percentage of floating rate liability payments it makes, therefore decreasing its vulnerability to falling interest rates.

An interest swap would allow Bank A to make payments to Bank B based on a fixed rate (7%) while receiving payments from Bank B based on a floating rate (6-month LIBOR). (The amount of the payments are calculated by applying the interest rate to a "notional"

Diagram 1

Interest Rate Swap Example

Fixed Rate = 7%, Floating Rate = 6-month LIBOR,
Notional Amount = $100 million, Term = 5 years



amount, for example 7% of $100 million and LIBOR of $100 million, but the notional amount, the $100 million, is not exchanged or owed by either party, as it is in the case of a loan. The notional amount is used for calculation purposes only. The notional amount is based upon the amount of assets and liabilities the banks wish to hedge.) By entering into the swap, Bank A is achieving its desired goal of increasing the percentage of floating rate asset payments it receives while increasing the percentage of fixed rate liability payments it makes. Bank B would, in turn, make payments to Bank A based on a floating rate (6-month LIBOR) while receiving payments from Bank A based on a fixed rate (7%). This way, Bank B is achieving its desired goal of increasing the percentage fixed rate asset payments it receives while increasing the percentage of floating rate liability payments it makes. Neither Bank A nor Bank B would be betting on whether or not they thinks interest rates will rise or fall, but would enter into the swap so that it will be less vulnerable to interest rates moving either way. Both Bank A and Bank B would enter into the swap regardless of whether it thinks interest rates will rise or fall. Both Bank A and Bank B, in essence, would be "buying" an insurance policy against a change in interest rates, and more firmly "locking in" a profit.

The swap allows both Bank A and Bank B to change their asset/liability cash flow mix without taking on new assets (loans) and liabilities (debt) which involve large principal amounts being owed. Once again, a swap does not involve the exchange of any principal amounts and instead involves only cash flows. If, for example, Bank A fails and defaults on the swap, it does not owe Bank B the $100 million, as it would on a loan. Instead, the cost to Bank B is that of finding another Bank to enter into a similar contract in place of Bank A, which may be more expensive to Bank B if the interest rate environment has changed in the meantime. This cost to Bank B is referred to as a "replacement cost", which would typically be much less than the cost of not receiving principal on the equivalent amount of loans needed to achieve the same desired change in cash flows.

In the current market, it is rare for two counterparties, such as Bank A and Bank B used in the example above, to enter into a swap agreement directly with each other. Instead, a dealer is involved. The dealer would be the counterparty to both Bank A and Bank B in two separate transactions. The dealer would enter into a swap with Bank A in place of Bank B in the example above. Then, the dealer would enter into an opposite swap with Bank B in place of Bank A in the example above. The result would be effectively the same for Bank A and Bank B regardless of whether or not a dealer was involved, but with the presence of a dealer, Bank A and Bank B would have the added benefit of not being responsible for finding another bank who wishes to enter into a customized swap transaction. Instead, both Bank A and Bank B would go directly to an established dealer, and would be exposed to that dealer instead of each other. The dealer in this case, as in most cases, would not be exposed to interest rate risk because it would have entered into two swap contracts which offset one another (in the first swap with Bank A, the dealer would be receiving fixed and paying floating; and in the second swap with Bank B, the dealer would be receiving floating and paying fixed.) The dealer would earn money on pricing the two transactions slightly differently, therefore making a "bid/offer" spread for its services.

Other Uses of Interest Rate Swaps

Asset-Liability Management/Reduce Funding Costs: Interest rate swaps were initially developed to address the needs of parties with mismatched assets and liabilities, such as Bank A and Bank B in the above example. For a corporate end-user, interest rate swaps can also be used to achieve a more desirable asset/liability mix. An industrial company, for example, may have the ability to borrow floating rate funds but desires to borrow fixed rate funds in order to balance fixed rate assets and/or to accurately predict future costs. If the credit rating of the industrial company is not in one of the higher categories, it will not be able to raise fixed rate funds at what it

considers acceptable rates. Therefore, the industrial company may seek to enter into a swap with a counterparty, such as a bank, who has a higher credit rating and can therefore borrow fixed rate funds at a lower rate. The bank may have a need for floating rate funds and would therefore desire also to enter into the swap. As mentioned above, such transactions typically involve a dealer who enters into two separate swap transactions so that the industrial company and the bank do not have to seek out one another. Interest rate swaps can also be used by banks to lower their cost of funds by exploiting credit spreads between the fixed and floating rate markets.

In order to accommodate specific needs, the industry has developed many other variations of the basic or "plain vanilla" swap. Variations include **accreting rate swaps or step-up swaps**, in which the notional amount increases over the life of a swap, or **amortizing rate swaps**, in which the notional amount decreases over the life of a swap. An accreting swap can be used when the underlying principal is expected to increase, for example, when an institution is borrowing in the form of a line of credit which it draws upon at a floating rate over time. An amortizing rate swap can be used to hedge a borrowing that is repaid in installments. In addition, instead of an interest rate swap involving an exchange of fixed for floating rate, an interest rate swap may involve the exchange of a floating rate for a rate that is based on an interest rate index.

An Alternative Financing or Funding Vehicle: An interest rate swap may also be used to create a "Synthetic Security". A synthetic security combines a security instrument with an interest rate swap or derivative swap product that has payment dates and cash flow patterns coincident with those of the asset. By entering into such a contract, an investor can create a new security with enhanced, and more desirable, performance features. For example, an institutional investor may like the high credit rating associated with a particular security, but not the fixed coupon rate. In this case, the investor would enter into a swap with a bank whereby the bank commits to pay a fixed rate on a notional amount (which will equal the principal amount of the securities purchased by the investor) and the investor commits to pay a floating rate (based on the coupon payment of the securities). Thus, a synthetic security is created through the use of a swap. Synthetic securities, in practice, are most commonly used to create a floating-rate asset from a fixed-rate asset.

Hedge Interest Rate Exposure: Interest rate swaps can also help an institution holding a long-term bond to protect asset value though a period of expected interest rate turbulence. The institution can enter into a swap where it makes fixed rate payments in return for receiving floating rate payments during that period, thereby alleviating the need for the institution to sell the bond outright. Interest rate swaps can also be used to hedge against adverse changes in rates even though the related borrowing may not occur for several months or years. This can be accomplished either by using a conventional interest rate swap, or other swaps such as a **forward swap** or an **option on an interest rate swap**. A forward swap obligates both parties to enter into a swap which is based on current fixed rates but does not commence until several months or years in the future. An option on an interest rate swap gives one counterparty the right, but not the obligation, to enter into an interest rate swap at some point in the future.

Trading/Speculation: Interest rate swaps may, to a much lesser extent, be used for trading and speculation. In general, if a firm enters into an interest rate swap without hedging a corresponding asset or liability, the firm creates an interest rate

position for the life of the swap. Interest rate swaps can also be used as fixed income trading vehicles, as can basic U.S Treasury and corporate bonds. For example, a five-year swap to receive fixed and pay floating is analogous to purchasing a five-year bond financed at the floating LIBOR rate. This position can be unwound or essentially "sold" in the swap market at a gain/loss to the institution, as can an intermediate bond in the secondary bond market. In this way, institutions can take advantage of the slope of the yield curve or the relative behavior of different indices.

(ii) Currency Swaps

A currency swap is one in which two counterparties exchange payment streams and, unlike other swaps, principal (notional) amounts, based on two different currencies. Currency swaps may also involve more than two counterparties. Maturities of currency swaps are typically longer than the maturity of other swaps. One of the most common types of currency swaps is a Cross-Currency Interest Rate Swap which involves the exchange of streams of interest rate payments in different currencies and often on different interest bases (for example, fixed interest rate payments in Japanese yen for floating interest rate payments in U.S. dollars; or fixed interest rate payments in Japanese yen for fixed interest rate payments in U.S. dollars; floating for floating cross-currency swaps also exist). Principal amounts, or the notional amounts, to which the interest rate is applied, are in many cases exchanged at inception of the swap. The exchange rate used is typically set at the foreign exchange rate at the time the swap is entered into. Principal amounts are then re-exchanged at the maturity of the swap or, alternatively, are exchanged over a series of repayment dates. Payments are usually made on a gross basis.

Cross-Currency Interest Rate Swap Example Described Below

(See Diagram 2 next page)

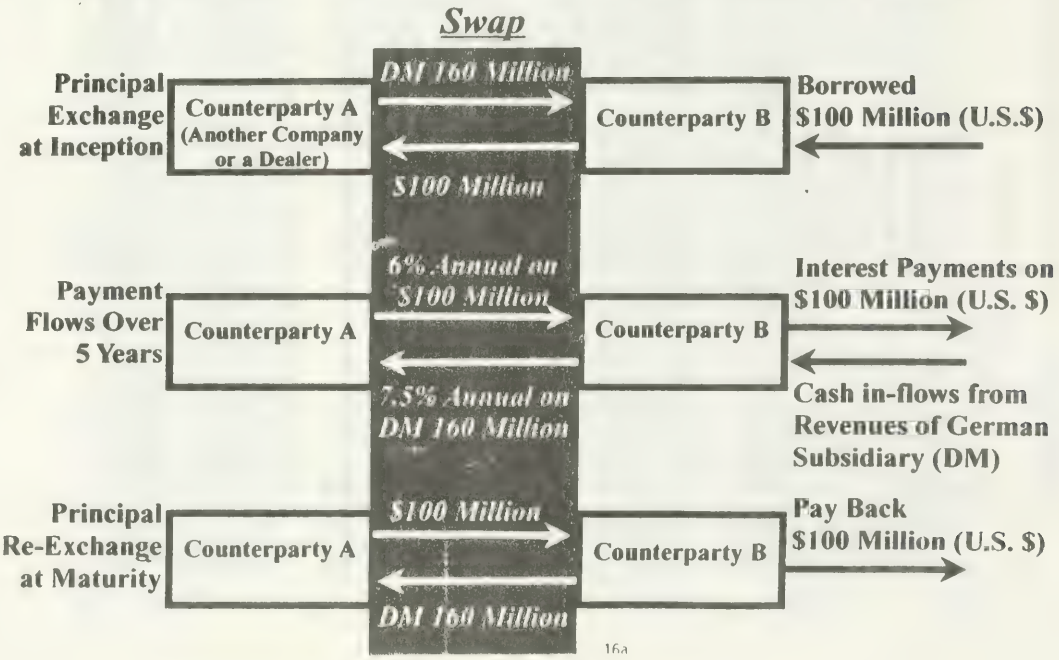
In this example, suppose that Counterparty B is headquartered in the U.S. but has a major subsidiary in Germany. Therefore, Counterparty B has sizable revenues (cash in-flows) in Deutsche marks, but has borrowed debt (cash out-flows) in U.S. dollars. Counterparty B is then vulnerable to a decline in the value of the mark compared to the dollar, because as the value of the mark declines, the value of Counterparty B's cash in-flows in marks will decline. If the value of Counterparty B's cash in-flows decline, it will take a greater amount of Deutsche mark cash in-flows to help pay off the U.S. dollar cash out-flows. Counterparty B may then wish to enter into a currency swap so it can pay its cash out-flows in marks (instead of U.S. dollars) to match the cash in-flows it is receiving in marks.

In the currency swap, Counterparty B would give to Counterparty A $100 million dollars (which it, in essence, received from its U.S. debt borrowing of $100 million) and would receive from Counterparty A 160 million marks (the amount of marks is based on a current exchange rate in this case of 1.6 DM/$.) Over the life of the five year currency swap, Counterparty B would pay 7.5% interest on 160 million marks (therefore achieving its desired goal of converting its cash out-flows to marks instead of dollars in order to match its cash in-flows which are in marks) and receive from Counterparty A 6% interest on $100 million (which it can use to pay its U.S. dollar debt.) Counterparty B would no longer be exposed to the change in value of the mark compared to the dollar, as the swap allowed it to effectively "swap" its U.S. dollar debt into Deutsche mark debt. At the end of the five years, the principal amounts would be paid in reverse, with Counterparty B paying Counterparty A 160 million marks and receiving from Counterparty A $100 million. In this

Diagram 2

Cross-Currency Interest Rate Swap Example

Fixed Rate A = 6%, Fixed Rate B = 7.5%, Term = 5 years,
Notional or Principal Amount = U.S. $100 million or 160 million Deutsch Marks (DM),
Fixed for Fixed/Principal Amount Exchanged at both Inception and Maturity



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example, Counterparty A could be a company in the opposite situation as Counterparty B or could be a dealer.

Other Uses of Currency Swaps

Asset-Liability Management: Financial institutions and other companies use currency swaps to protect themselves from sharp and unpredictable shifts in exchange rates which can reduce their profits significantly or eliminate them altogether. A currency swap can help such institutions more closely match, by currency and maturity, long-term cash in-flows with cash out-flows. Currency swaps also help financial institutions and other companies alleviate such funding problems as the lack of available credit in local foreign markets, high interest rates in available markets, foreign exchange controls and regulations in the countries involved, and tax and accounting problems. As for hedging, an institution may enter into a currency swap for the reasons given in the example above; or, in another situation, an institution with foreign-currency debt not matched by foreign currency assets may enter into a foreign currency swap to protect against a rise in debt cost due to a depreciation in the institution's domestic currency.

An Alternative Financing or Funding Vehicle/Reduce Funding Costs: An institution may traditionally fund itself in its home currency but face major interest rate risk thereby. Therefore, the institution may wish to fund itself in a foreign currency which offers a preferable exchange and interest rate risk combination. The institution, however, may lack direct access to foreign-currency funding. A currency swap helps such an institution borrow in a desired currency in a more efficient way than a non-derivative parallel loan structure. (This is analogous to how an interest rate swap allows institutions to change cash flows without entering and exiting the cash markets.) In a parallel, or back-to-back, loan structure, two institutions with headquarters in different countries, each having a subsidiary in the other's country, would lend to each other equivalent amounts of their respective currencies based upon current rates of exchange. Each lender would charge interest to the other, based upon prevailing lending rates in the two countries. There would be two separate loan agreements and two separate gross interest rates. A straight currency swap shares some of the characteristics of a parallel loan, but is a much simpler and efficient financing device. A currency swap can be structured to involve a present exchange of two currencies and an agreement to re-exchange these currencies after a set period. The initial exchange of currencies would be made at the current spot rate. The currency swap would contain only a single agreement and a single commission fee, usually annual, which would be characterized as a net interest rate.

Hedge Existing Exchange Rate Exposure: If an institution has an exposure in a foreign currency (an asset such as a loan, security, or trading position) and its intention is not to take a view on the future direction of interest and/or currency rates, the institution may enter into a currency swap with a notional amount and interest rate which matches that of the asset or trading position in order to protect itself against changes in currency values and interest rates.

Trading/Speculation: Currency rate swaps may, to a much lesser extent, be used for trading and speculation. In general, if a firm enters into a currency swap without hedging a corresponding asset or liability, the firm creates a forward foreign exchange

position for the life of the swap.

(iii) Commodity Swaps

A commodity swap is one in which two counterparties exchange payment streams where at least one payment stream is based on a commodity price index. Typically one payment stream is based on a fixed rate and the other on an average floating rate, allowing one party to make payments based on a specified fixed price for a specified amount of a commodity and receive payments based on the market price at specified payout dates over the lifetime of the swap. Like other swaps, a hypothetical quantity of the commodity (the "notional" amount) is used to calculate the payment streams. The notional amount is typically used for calculation purposes and not exchanged or owed by either counterparty. However, physical delivery of the notional amount of the underlying commodity may occur in some instances. Commodity swaps enable producers and institutional consumers to hedge commodity price risk. Usually, the producer pays floating and the institutional consumer pays fixed.

A commodity swap, like other swaps, is usually structured so that a dealer acts as the intermediary between producers and institutional consumers seeking to hedge their risks against fluctuations in the value of a certain commodity, such as petroleum, used in their business. Producers are usually concerned that the future market price of a commodity will be less than their costs of production, and institutional consumers are usually concerned that the future price of a commodity will increase above current levels. As such, commodity swaps are designed to function in much the same way an interest rate swap would for entities seeking to hedge their interest rate exposures.

Commodity Swap Example Described Below
Dealer Involved

Part I - Producer of Oil Hedges its Revenue (hedges a decrease in oil prices)

(See Diagram 3 next page)

Part II - Airline Hedges its Cost (hedges an increase in oil/jet fuel prices)

(See Diagram 4 next page)

In a typical commodity swap, a commodity and fixed reference price are specified for the purpose of calculating payments based on a specified notional quantity or volume of the commodity.[22] The counterparties also use a floating market price of the commodity on specified dates to determine the amounts due under the swap. In this example, the oil producer (Counterparty A) wishes to hedge against a drop in the price of oil. Under the swap between the oil producer (Counterparty A) and a dealer (Counterparty B), the dealer agrees to make payments based on the fixed reference price of the oil (WTI fixed term price) and the oil producer agrees to make payments based on the floating market price (WTI average floating spot price). (The dealer is acting as a institutional consumer of the commodity would, and the dealer will typically enter into a second "opposite" swap with an

[22] Source: Citibank.

Diagram 3

Commodity Swap Example (Part I)

Producer of Oil Hedges its Revenue (hedges a decrease in oil prices)
Commodity = Oil, Fixed Rate = West Texas Intermediate (WTI) Fixed Term Price,
Floating Rate = WTI Average Floating Spot Price

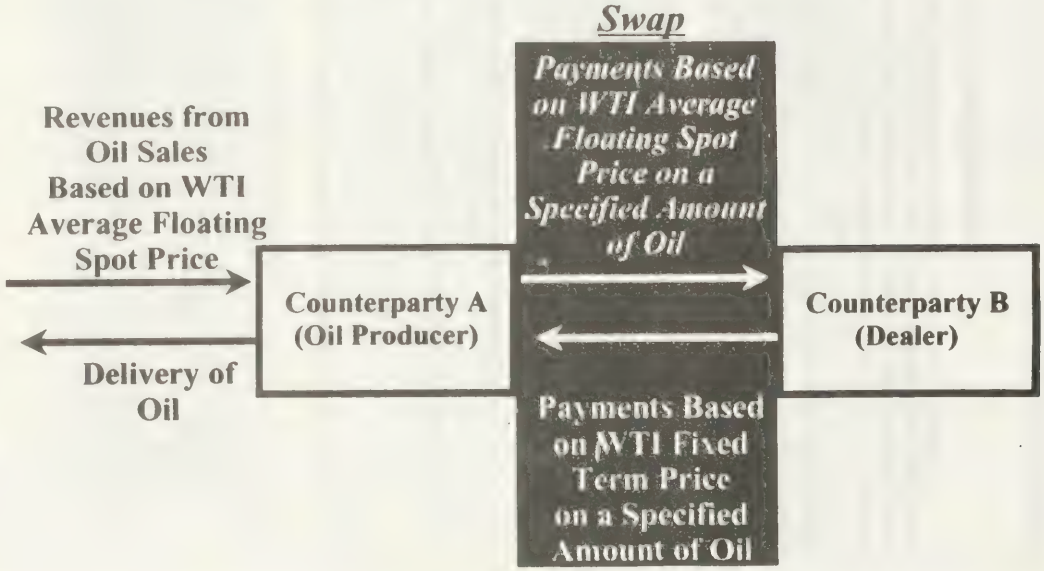
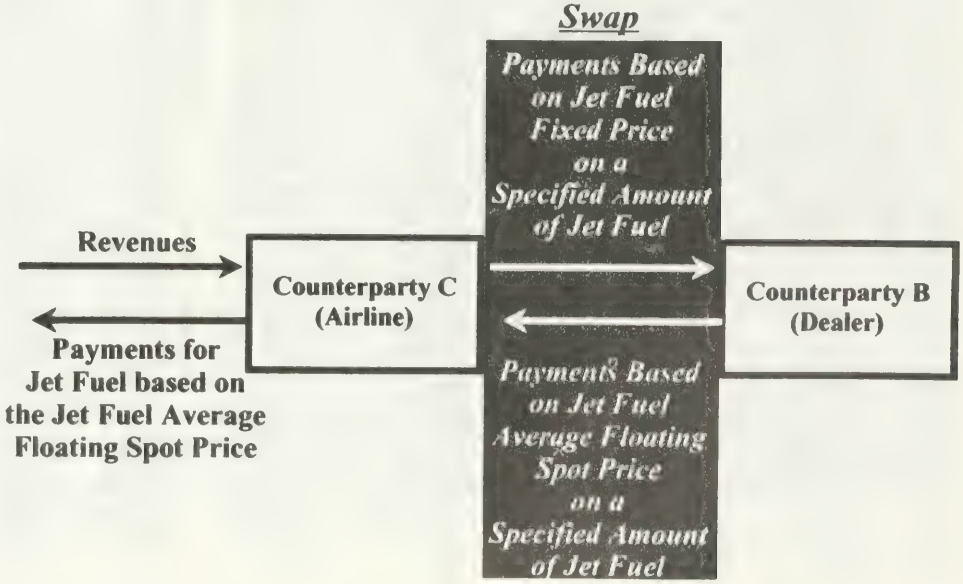

Swap
Payments Based on WTI Average Floating Spot Price on a Specified Amount of Oil
Revenues from Oil Sales Based on WTI Average Floating Spot Price
Counterparty A (Oil Producer)
Counterparty B (Dealer)
Delivery of Oil
Payments Based on WTI Fixed Term Price on a Specified Amount of Oil

Diagram 4

Commodity Swap Example (Part II)

Airline Hedges its Cost (hedges an increase in oil/jet fuel prices)
Commodity = Jet Fuel, Fixed Rate = Jet Fuel Fixed Price,
Floating Rate = Jet Fuel Average Floating Spot Price


Swap
Payments Based on Jet Fuel Fixed Price on a Specified Amount of Jet Fuel
Revenues
Counterparty C (Airline)
Counterparty B (Dealer)
Payments for Jet Fuel based on the Jet Fuel Average Floating Spot Price
Payments Based on Jet Fuel Average Floating Spot Price on a Specified Amount of Jet Fuel

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institutional consumer, as demonstrated as Part II of this example. In this way, the effect will be the same as if the producer and institutional consumer had entered into the swap with each other. However, with the presence of the dealer, the producer and the institutional consumer do not have to find each other.) Under the swap, if the floating market price of the oil falls below the fixed reference price, the net payment based on the excess of the reference price over the market price will be paid by the dealer to the producer; and if the floating market price of the oil exceeds the fixed reference price, the net payment based on such excess will be paid by the producer to the dealer. In essence, the producer, through the swap has "locked in" a sale price of his oil at the fixed reference price and the producer has foregone any upside potential of an increase in prices beyond the reference rate. More specifically, if a producer expects to sell 20 million barrels of oil at prices ranging between $18 and $22/barrel, to smooth out his monthly revenue stream, he may agree to pay the swap dealer the floating spot average price for the month and receive in exchange a fixed price of $20/barrel for 20 million barrels.

In the second swap between the dealer (Counterparty B) and an institutional consumer of jet fuel (Counterparty C), the converse occurs. In this example, the institutional consumer (Counterparty C) is an airline who wishes to hedge against a rise in the price of jet fuel, which typically rises when the price of oil rises. In such a swap, the dealer agrees to make payments based on the floating market price of jet fuel (jet fuel average floating spot price) and the airline agrees to make payments based on the fixed reference price (jet fuel fixed price). Under the swap, if the floating market price of jet fuel is less than the fixed reference price, the airline will make a net payment to the dealer based on such excess and, if the market price exceeds the reference price, the dealer will make a net payment to the airline. In essence, the airline, through the swap, has obtained a stable price for jet fuel but has forgone the benefits of a decrease in the price below the reference price. This allows the airline to operate with an anticipated, fixed cost base.

As the result of the two swaps, the dealer has enabled the counterparties to hedge the risks of decreases in oil prices (in the case of the swap with the oil producer) and hedge the risk of increases in jet fuel prices (in the case of the swap with the airline). Commodity swaps are typically only financial arrangements and payments are made in cash. Neither the dealer or the counterparty is typically, at any time, required to purchase the commodity on which the swap is based.

Other Uses of Commodity Swaps

Commodity swaps were developed by banks to provide customers with hedging instruments that are more flexible and tailored than commodity futures contracts. Commodity futures contracts are limited in terms to the type of commodity and maturity and have standardized notional amounts. Commodity swaps can be tailored so that a swap can more perfectly hedge an underlying transaction.

Commodity swaps enable producers and institutional consumers to hedge commodity price risk. There is growing swap activity in the principal non-ferrous metals, such as copper and aluminum, and more in gold, based on the advantages of the swap instrument for protecting long-term project financing vulnerable to price instability. The major activity of commodity swaps, however, now lies in petroleum and petroleum products.

In 1989, the CFTC gave banks a broad exemption from regulation relative to swap transactions involving commodities. Since the CFTC exemption, bank dealer participation in this market has been growing rapidly. To date, the business has been concentrated in large, sophisticated institutions that have the systems capability and

technical expertise to manage the risks associated with these products.

(iv) Equity Swaps

An equity swap is one in which two counterparties exchange the rate of return (or a component thereof) of an equity investment (an individual stock, a basket of stocks or an index of stocks) for the rate of return of a non-equity investment (such as a bond index) or another equity investment. Typically, an investor will swap either fixed or floating rate interest payments, on a bond, for example, for payments indexed on the performance of a broad-based stock index in a domestic or foreign market. Like other swaps, a hypothetical "notional" amount is used to calculate the payment streams. The notional amount is used for calculation purposes only and is not exchanged or owed by either counterparty. Capital appreciation also may be included on one or both sides of the swap.

Equity Swap Example Described Below
(Institutional Investor Exchanges a Fixed Income Bond Return for an Equity Return)

(See Diagram 5 next page)

In this equity swap, Counterparty A is an institutional investor who holds a bond portfolio on which it receives a fixed interest rate return. The institutional investor wishes to exchange that fixed bond return for an equity return without incurring the transaction costs of liquidating its existing bond portfolio and building an outright equity portfolio. Therefore, the institutional investor enters into an equity swap with Counterparty B (another investor with the opposite goal or, much more typically, a dealer who subsequently enters into a second and opposite swap with another investor). The institutional investor (Counterparty A) pays a fixed sum to Counterparty B based on the fixed return Counterparty A is receiving on its bond portfolio. In return, Counterparty B pays a sum based on the equity returns of the S&P index to Counterparty A. Again, this enables Counterparty A to receive the benefits, for a period of time, of an equity return, while retaining its bond portfolio for the longer-term benefits.

Other Uses of Equity Swaps

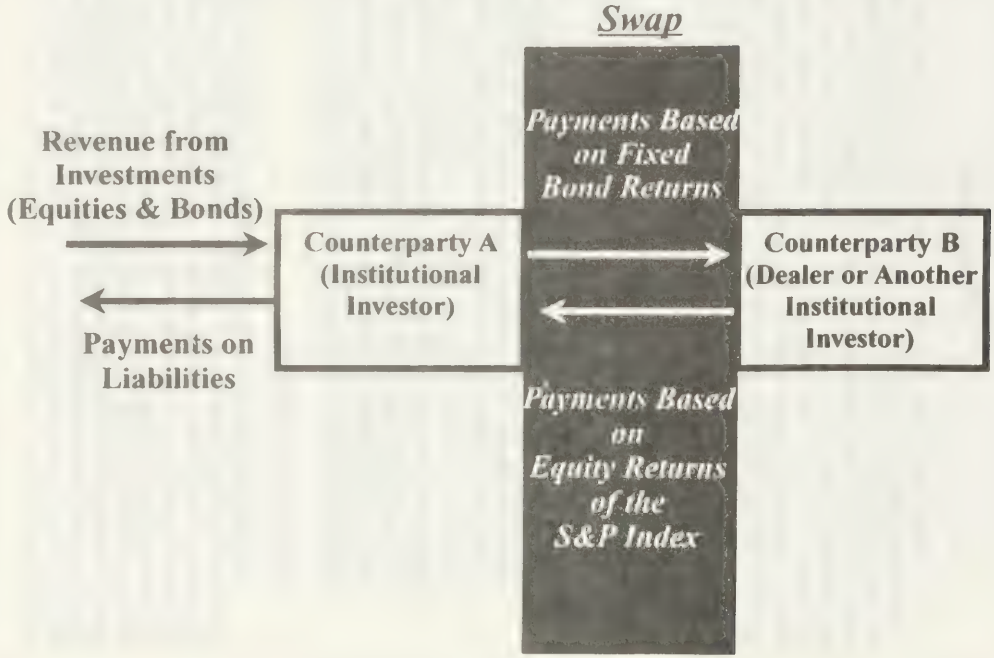
An equity swap which involves the exchange of a fixed income return for an equity return, as in the above example, allows an investor to earn equity returns when the investor deems them promising without the transaction costs of liquidating an existing bond position or building an outright equity position. The investor also avoids the complications of transacting in unfamiliar markets and choosing individual stocks when a stock index will suffice. Equity swaps, as with all swaps, may be enhanced by options features customized to the interests of the investor. A counterparty on the other side of the equity swap may wish to change the equity base on which it earns returns or change its base to a non-equity base, such as a stable and predictable bond, for a specified period of time to achieve particular business objectives.

An equity swap may also involve the exchange of one equity return for another equity return, thus allowing an institutional investor to exchange one market risk for another market risk. (For example, an investor may pay a swap dealer or other counterparty a fixed sum based on the S&P index, and the dealer or other counterparty

Diagram 5

Equity Swap Example

Institutional Investor Exchanges a Fixed Income Bond Return for an Equity Return


Swap
Payments Based on Fixed Bond Returns
Revenue from Investments (Equities & Bonds)
Counterparty A (Institutional Investor)
Counterparty B (Dealer or Another Institutional Investor)
Payments on Liabilities
Payments Based on Equity Returns of the S&P Index

may pay the investor a fixed sum based on the DAX index (a German securities index).)

Institutional investors who use equity swaps and other equity derivatives include: insurance companies and investment fund companies, such as mutual funds, who want to sell new products to their retail clients; pension funds who want to have an exposure to a certain equity market without having to buy the shares in the market; and corporate treasurers who want tools to manage or hedge different exposures on their balance sheets. Through equity derivatives, such institutions may now have an exposure to all leading stock markets in the world without having to actually buy shares in those markets.[23]

[23] Sharpe, Antonia, "Equity Products: Hedge Against Stock Swings," The Financial Times, October 20, 1993.

(b) Forwards

A forward contract obligates one counterparty to buy, and the other to sell, a specific underlying instrument at the current, or spot, price, amount, and date for delivery in the future (over 30 days). Customarily, there is no money settlement at the beginning of the forward contract or during the lifetime of the contract, but only on the maturity date. On the maturity date, the difference between the contracted rate or price and the prevailing rate or price at the time of maturity is settled in cash. Forwards are used by institutions to lock in a certain interest rate, exchange rate, commodity price, or equity return at a date in the future. The most common type of forward contract is a Forward Foreign Exchange Contract, based on currency rates, with a typical maturity of one, three or six months, with some up to one year. The Commodity Exchange Act (CEA) excludes forwards from CFTC jurisdiction.[24]

Based on the underlying instrument, a forward contract can take several forms, including:

(i) Forward Rate Agreement (FRA)

Based on interest rates, counterparties agree on an interest rate to be paid on a notional amount on a specified future date.

(ii) Forward Foreign Exchange Contract

Based on currency rates, one counterparty agrees to buy, and the other to sell, a certain amount of a foreign currency at a certain exchange rate for delivery on a specified future date.

(iii) Forward Commodity Contract

Based on commodity prices, one counterparty agrees to buy, and the other to sell, a certain amount of a commodity at a certain price for delivery on a specified future date.

(iv) Forward Equity Contract

Based on stocks and stock indices, one counterparty agrees to buy, and the other to sell, a certain amount of equity contracts at a certain price for delivery on a specified future date.

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[24] Regarding forwards, see Sec. 1a(11) of the CEA, 7 USC §1. Regarding those transactions in the interbank market, see 7 USC §2. Also regarding interbank market, see 50 Fed. Reg. 42963 (Oct. 23, 1987).

Other Uses of Forwards

Forwards are used by both counterparties of a forward contract to lock in a certain interest rate, exchange rate, commodity price, or equity return on a date in the future. This allows both counterparties to achieve greater certainty in costs and revenues, and removes their vulnerability to changes in such rates and prices. Financial institutions, money managers, corporations, and traders use forwards for managing interest rate, currency, commodity, and equity risks. Forwards can also be used to arbitrage price discrepancies within and between markets and to speculate on market movements. While most large banks are active in the interest rate and foreign exchange markets, only a handful of banks have exposures in commodities or equities. Federal Reserve Board policy requires that forwards and futures be used prudently and that they be used generally to reduce risk.

For example, forward rate agreements (FRAs) are typically used by banks. The seller of the FRA agrees to pay the buyer of the FRA the difference between an interest rate agreed to in the contract and the prevailing reference rate (or spot rate), multiplied by the notional amount. If the reference rate at maturity is higher than the contracted rate, then the seller pays the buyer. If the reference rate at maturity is lower than the contracted rate, the buyer pays the seller. FRAs are often used as a hedging instrument for bank activities that expose the bank to interest rate risk. FRAs also allow a borrower or lender to lock in an interest rate for a period that begins in the future, thus extending the maturity of its liabilities or assets. For example, a bank that has limited access to funds with maturities greater than six months and has relatively longer-term assets can contract for an FRA that will determine today the cost of six month funds it will receive in six months' time. Large banks may employ FRAs as a trading instrument. Market-makers seek to earn a spread through buying and selling FRAs. Trading may also take the form of arbitrage between FRAs and interest rate futures or short-term interest rate swaps.

Banks use forwards and futures (futures are described below) to manage the risk of their assets and liabilities as well as off-balance sheet exposures. Asset-liability management may involve the use of financial forwards and futures to lock in spreads between borrowing and lending rates. These contracts may also be used to hedge investment portfolios against yield curve shifts. For example, banks can hedge mortgage portfolios by selling GNMA forwards.

Banks use foreign exchange forwards and futures to hedge positions arising from their foreign exchange dealing businesses. A bank that incurs foreign exchange exposure from assisting its customers with currency risk management can use offsetting contracts to reduce its own exposure. A bank can also use forwards or futures to cover unmatched currency swaps. For example, a dealer obligated to make a series of Deutsche mark payments could buy a series of Deutsche mark forwards and futures to reduce its exposure to changes in the US$/DM exchange rate.

Traders, investors, and banks can use forwards for speculating or taking calculated risks on price movements in various markets. Industry practitioners uniformly maintain that forwards are not, for all practical purposes, used for trading or speculation as there

exist instruments better suited for such purposes. According to OCC guidelines,[25] speculation by banks using forwards should be done only by those banks with strong capital and the level of risk management sophistication necessary to manage the activity.

Corporations engaged in international trade may use foreign currency contracts to hedge payments and receipts denominated in foreign currencies. A corporation may also use foreign exchange contracts to hedge the translation of its foreign earnings.

Risk-free arbitrage opportunities using forwards and futures, whereby a trader can exploit mispricing across related markets to lock in a profit, are quire rare. There may be very brief periods of time when pricing in the forward or futures market is not consistent with pricing in the cash market (e.g., bond and stock).

[25] Office of the Comptroller of the Currency, An Examiners Guide to Investment Product and Practices.

(2) Future-Based Derivatives (Exchange-Traded)

(a) Futures

Future-based derivatives are similar to forward-based derivatives, but the terms of future-based derivatives are standardized (exchange-traded). Under the U.S. Commodity Exchange Act, futures may be lawfully entered into in the U.S. only on a regulated exchange. The CEA gives the CFTC jurisdiction over future-based derivatives.[26]

A future is an agreement to buy or sell a specific amount of a financial instrument or a commodity at a particular price on a specified future date. Unlike a forward-based derivative which is typically customized (OTC), a future-based contract is standardized, as the price and other terms are established between the buyer and seller on the floor of an organized exchange (exchanged-traded). A future obligates the buyer to purchase the underlying commodity or financial instrument and the seller to sell it, unless the contract is sold to a third party before settlement date, which may happen if a trader wants to take a profit or cut a loss. (This contrasts with options transactions, in which the option buyer may choose whether or not to exercise the option by the expiration date.) Most futures agreements do not involve the physical delivery of the underlying instrument, but instead are settled in cash. Some futures, such as those on Eurodollars, municipal bond indices, and equity indices, actually specify cash payment rather than physical delivery. In establishing futures hedges, an institution must first identify and quantify the exposure to be hedged and then purchase or sell an appropriate number of futures contracts to offset any price movement for the hedged cash position.

Futures have centralized clearing, margin requirements, and daily settlements through the organized exchanges. A futures exchange operates in tandem with a clearinghouse that interposes itself as a counterparty between buyers and sellers and guarantees payments to them. A futures transaction actually consists of two simultaneous agreements: one between the clearinghouse and the buyer and one between the clearinghouse and the seller. A contract can be easily reversed by entering into an offsetting transaction. Futures prices are determined competitively via an open outcry system. When entering into a futures transaction, counterparties post an initial margin requirement such as 5% to 10% of the principal amount of the contract. At the end of each day, the futures position must be marked to market with gains or losses added to or subtracted from the counterparties' margin accounts. The balance in a margin account cannot fall below the maintenance margin, which typically corresponds to a contract's maximum allowable daily price movement. Should the position fall below the maintenance margin, the counterparty must put up additional collateral known as variation margin. On the other hand, if the position increases in value, the counterparty may withdraw the excess margin. For traders that have positions in a variety of futures and cash instruments, margin can be determined on a portfolio basis.

Futures are bought and sold on exchanges such as the Chicago Board of Trade (CBOT), the New York Futures Exchange (NYFE), the Chicago Mercantile Exchange (CME), and the London International Financial Futures Exchange (LIFFE).

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[26] Specifically, Section 2(a)(1)(A)(i) of the Commodity Exchange Act grants to the Commission exclusive jurisdiction over "accounts, agreements (including any transaction which is of the character of, or is commonly known to the trade as, an 'option,'...), and transactions involving contracts of sale of a commodity for future delivery ..." 7 USC §2.

Like other derivatives, the type of future depends on the underlying instrument to be bought and sold at a specified price on a specified date. Futures can be divided into interest rate futures, currency futures, commodity futures, and equity index futures.[27]

(i) Interest Rate Futures

The International Monetary Market (IMM), a division of the CME, and the CBOT handle most of the fixed-income interest rate futures in the United States. Futures on longer-term contracts such as Treasury notes, Treasury bonds, and GNMA mortgage pass-through securities are listed on the CBOT. Futures on short-term instruments such as Eurodollar deposits, Treasury bills, and certificates of deposit are traded on the IMM. There are also futures on bond indices such as those for municipal bonds, corporate bonds, Japanese government bonds, and British gilts. As with currencies, the most active overseas exchanges are in London, Tokyo, and Singapore. Commonly, delivery of the underlying instruments is not taken. Instead, the futures position is closed out by purchasing or selling the offsetting futures contract. Other products include futures on French Government Bonds or CAC-40 (on the Marche a Terme International de France or MATIF), futures on the German Bund (on the Deutsche Terminborse or DTB, where a Bund is the German government long-term bond), futures on ECU interest rates, and futures on interest rate swaps.

(ii) Currency Futures

In the U.S., currency futures trade on the IMM division of the CME, with the most important currencies traded including the Deutsche mark, Japanese yen, British pound, Canadian dollar, and Swiss franc. Overseas, the most active currency futures exchanges are in London, Tokyo, and Singapore. Products include futures on U.S. dollars, futures on Deutsche marks, and futures on Eurodollars.

(iii) Commodity Futures

Commodity futures usually entail delivery of the physical commodity, both agricultural and non-agricultural commodities, upon expiration of the contract and trade on the commodity exchanges. Commodity futures are typically broken down into a) energy futures; b) precious metal futures; and c) agricultural futures, both domestic and international soft.[28]

(iv) Equity Index Futures

In the U.S., equity, or stock, index futures include those based on the S&P 500

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[27] It is important to note that under the Commodity Exchange Act, certain interest rate instruments, currency instruments, equity instruments, and commodity instruments are all considered a type of financial commodity.

[28] Soft is an industry term for sugar, cocoa, and coffee. Source: "The CFTC Glossary: A Layman's Guide to the Language of the Futures Industry," CFTC December 20, 1991.

(on the CME), the Major Market Index (on the CBOT), the New York Stock Exchange Composite Index (on the NYFE), and the Nikkei 225 Index (on the CME). Overseas, there are futures based on many of the major equity markets, including the Nikkei (Osaka and Singapore Futures Exchanges), the DAX (on the LIFFE), and the FT-SE 100 (on the LIFFE).

Other Uses of Futures

Futures are used by institutions to lock in a certain interest rate, exchange rate, commodity price, or equity return on a date in the future. This allows institutions to achieve greater certainty in costs and revenues, and removes their vulnerability to changes in such rates and prices. Financial institutions, money managers, corporations, and traders use futures for managing interest rate, currency, commodity, and equity risks. Futures can also be used to arbitrage price discrepancies within and between markets and to speculate on market movements. While most large banks are active in the interest rate and foreign exchange markets, only a handful of banks have exposures in commodities or equities. Federal Reserve Board policy requires that forwards and futures be used prudently and that they be used generally to reduce risk.

Banks use forwards and futures to manage the risk of their assets and liabilities as well as off-balance sheet exposures. Asset-liability management may involve the use of financial forwards and futures to lock in spreads between borrowing and lending rates. For example, a bank may sell Eurodollar futures in advance of an anticipated funding in order to lock in the cost of the funds. If LIBOR subsequently increases, the short futures position will increase in value offsetting the higher spot interest cost that the bank will have to pay on its funding. These contracts may also be used to hedge investment portfolios against yield curve shifts. For example, banks can hedge mortgage portfolios by selling futures.

Banks also use foreign exchange forwards and futures to hedge positions arising from their foreign exchange dealing activities. A bank that incurs foreign exchange exposure from assisting its customers with currency risk management can use offsetting contracts to reduce its own exposure. A bank can also use forwards or futures to cover unmatched currency swaps. For example, a dealer obligated to make a series of Deutsche mark payments could buy a series of Deutsche mark forwards and futures to reduce its exposure to changes in the US$/DM exchange rate.

Corporations engaged in international trade may use foreign currency contracts to hedge payments and receipts denominated in foreign currencies. For example, a U.S. corporation that exports to Germany and expects payment in Deutsche marks could sell Deutsche mark futures to eliminate the threat of lower Deutsche mark spot rates at the time that the payment arrives. A corporation may also use foreign exchange contracts to hedge the translation of its foreign earnings.

Farmers use futures on commodities in order to lock in a specific price on a crop they are planning to sell in the future. **For example, if a wheat farmer is planning to sell his wheat into the market in nine months, he may wish to sell a future in order to lock in a price that he will receive for his wheat in nine months. For example, a wheat farmer may sell a future which obligates another party to buy 40,000 bushels of wheat at $3/bushel ($120,000). If the market**

price of wheat is only $2/bushel in nine months, the farmer benefits by instead receiving $3/bushel ($120,000) due to the future. (Or the other party can choose not to take physical delivery of the wheat and instead settle the trade in cash by paying the farmer $1/bushel ($40,000), and the farmer could subsequently sell his wheat in the market for $2/bushel ($80,000), for a net receipt to the farmer of $120,000.) If the market price of wheat is $4/bushel in nine months, the farmer does not benefit, as he only receives $3/bushel ($120,000) due to the future when he could have received $4/bushel ($160,000) if he had not entered into the future. (Or the other party can choose not take physical delivery of the wheat and the farmer can instead settle the trade in cash by paying to the other party an amount equal to $1/bushel ($40,000), and subsequently sell his wheat in the market for $4/bushel ($160,000), for a net receipt to the farmer of $120,000.) The receipt of $120,000 is, in both cases, increased by the amount of money the farmer received from the sale of the future.

Risk-free arbitrage opportunities using forwards and futures, whereby a trader can exploit mispricing across related markets to lock in a profit, are quite rare. There may be very brief periods of time when pricing in the forward or futures market is not consistent with pricing in the cash market.

Traders, investors, and banks can use futures for speculating or taking calculated risks on price movements in various markets. According to OCC guidelines,[29] speculation by banks using futures should be done only by those banks with strong capital and the level of risk management sophistication necessary to manage the activity. Futures have the advantage of lower transactions costs and higher leverage. Speculators may make bets on changes in future prices by having uncovered long or short positions, combinations of long and short positions, combinations of various maturities, or cash and futures positions. Speculators may profit from uneven shifts in the yield curve, fluctuations in exchange rates, or changes in interest rate differentials.

Money managers use financial futures as an asset allocation tool. Futures allow managers to shift the fixed-income, currency, and equity portions of their portfolios without having to incur the costs of transacting in the cash markets. A fixed-income manager may use bond futures to readjust the composition of a fixed-income portfolio in response to a particular outlook on interest rates. For example, a manager anticipating an increase in interest rates can shorten portfolio duration by selling Treasury bond futures or buying Treasury bill futures. Currency futures could be used to reduce currency risk in an international portfolio. Equity index futures can be used to adjust a portfolio's exposure to the stock market.

Pension and other types of benefits managers may hedge a fixed future liability by selling futures or hedge an expected receipt by buying futures. Interest rate swap dealers also use forwards and futures to hedge their exposures because directly offsetting swaps with the necessary terms cannot be found as quickly. The dealers rely on Eurodollar futures, Treasury futures, and floating rate agreements to hedge their unmatched commitments. For example, a dealer obligated to pay LIBOR may sell Eurodollar futures to protect itself against an increase in interest rates.

In addition to the direct benefits of hedging to users of futures markets, others in the marketplace benefit, according to the CFTC, from the price discovery function of futures markets. By providing continuous well publicized prices, futures markets provide information to all individuals involved in the production and marketing of commodities on which futures contracts are traded.

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[29] Office of the Comptroller of the Currency, An Examiners Guide to Investment Product and Practices.

b. Option-Based Derivatives (both OTC and Exchange-Traded)

The second type of derivative is the option-based derivative. In exchange for a premium, an **option** contract gives the option holder the right, but not the obligation (as does a forward/future-based derivative), to buy or sell an underlying instrument, or settle the value for cash, at a specified price on or before a specified date. The party granting the right is referred to as the option seller, or writer, and the party receiving the option is called the option buyer. The seller is obligated to perform on the contract, whereas the purchaser has a right, but not an obligation, to perform on the contract. A **call option** gives the buyer the right to purchase the underlying instrument and a **put option** gives the buyer the right to sell the underlying instrument. Purchasing a call option is considered a long position and the buyer expects to profit from the price of the underlying instrument exceeding the strike, or exercise, price within the life of the contract. The put purchaser expects to profit from the price of the underlying instrument declining below the exercise price of the contract. The exercise price is the price at which the contract owner has the right to buy or sell the underlying instruments. If it is not advantageous for the buyer of the option to exercise the option before the expiration date, the option expires and the option buyer loses the money paid as a premium. (The expiration date of an option is the last day that an option can be exercised or traded.)

An options contract may be an option on a physical instrument or an **option on a futures contract**. Typically, options on a physical instrument trade over-the-counter (OTC) and specify delivery of the underlying instrument. Other options, such as all options on futures, trade on exchanges (exchange-traded) and may specify either delivery of the underlying instrument or payment of net obligations. The CEA gives the CFTC jurisdiction over certain option-based derivatives.[30] The fair value of an option is the price at which an option contract should be trading in a liquid market, determined by a mathematical model (e.g., Black-Scholes Option Pricing Model[31]).

An **American Option** is one which can be exercised at any time prior to a specified date in the future. A **European Option** is one which must be exercised, if at all, on the specified future date. A **Eurobond Style Option** is one which can be exercised either on any of a series of specified dates or at any time after a specific date.

In practice, most call and put options are rarely exercised. Instead, institutions buy and sell options before expiration, trading on the rise and fall of premium prices. If the buyer of a put or call finds that it is not advantageous to exercise the option, the buyer can let it expire worthless. If the option has some value at expiration, the buyer can exercise the option and give (put) or take (call) delivery of the underlying instrument. If the option is an exchange-traded option and has increased in value, the buyer may prefer to take this profit by executing a liquidating closeout transaction, that is, the sale of an option with equal terms.

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[30] Specifically, Section 2(a)(1)(A)(i) of the Commodity Exchange Act grants to the Commission exclusive jurisdiction over "accounts, agreements (including any transaction which is of the character of, or is commonly known to the trade as, an 'option,'...), and transactions involving contracts of sale of a commodity for future delivery." 7 USC §2.

[31] The Black-Scholes Option Pricing Model is a model developed by Fischer Black and Myron Scholes to gauge whether options contracts are fairly valued. The model incorporates such factors as the volatility of a underlying instrument's return, the level of interest rates, the relationship of the underlying instrument's price to the strike price of the option, and the time remaining until the option expires. Black-Scholes is one of the more commonly used models, but many firms use variations of Black-Scholes or other alternative pricing models.

The buyer of an option can never lose more than the premium paid for the option. An option's price, or premium, has two components, the option's intrinsic value and the time value premium. The intrinsic value is the amount that the owner of the option would receive if the option were exercised at the current market price. An option that has intrinsic value is said to be "in-the-money". An "in-the-money option" occurs when the strike price of a call is lower than the market price of the underlying instrument, or when the strike price of a put is higher than the market price. An "out-of-the-money" option occurs when the strike price of a call is higher than the market price, or when the strike price of a put is lower than the market price.

See Chart 2 on next page for the payoff profile, or the value, of an option-based derivative.[32]

(1) Option-Based Derivatives

(a) Primary Types of Options

The primary types of options include interest rate options, currency options, commodity options, and equity options.[33]

(i) Interest Rate Option

An interest rate option is based on the right to buy or sell an underlying interest rate asset, such as a government bond, at a specific price. An interest rate option can be customized (OTC) or standardized (traded on an exchange). An interest rate option can be an option on an underlying physical instrument (such as a GNMA security) or can be an option on an interest rate futures contract. Typically, options on an underlying physical instrument are OTC and are regulated by the SEC. All options on futures are exchange-traded and regulated by the CFTC. An example of an exchange-traded interest rate option is a Bond Futures Option (on the LIFFE).

Much as forwards can be bundled to create swaps, options can be bundled to create other OTC interest rate options contracts called caps, floors, and collars. Like interest rate swaps, caps, floors, and collars are generally medium- to long-term transactions. A notional principal is used to calculate periodic cash flows. Banks can also speculate on interest rates by purchasing or selling caps and floors. Some financial institutions act as intermediaries in cap and floor agreements. A cap or floor may be sold and an offsetting cap or floor may be purchased in order to earn fee income.

a) Cap: An interest rate protection product which limits the maximum floating

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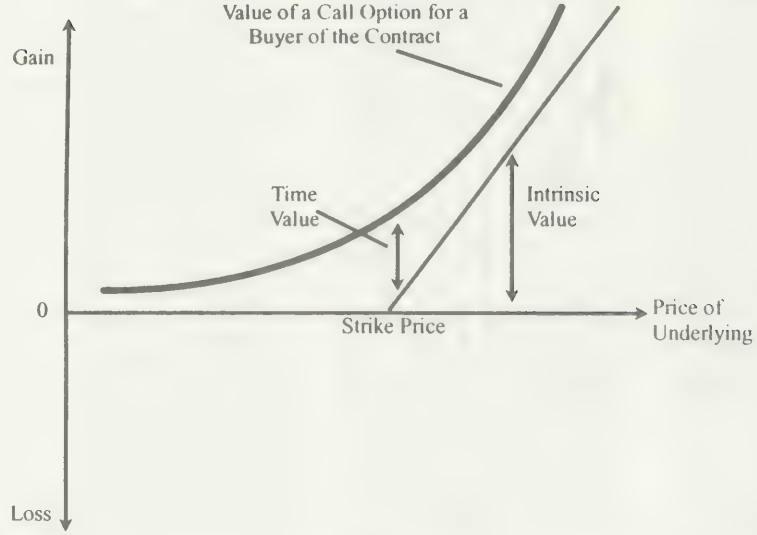
[32] Chart Source: Group of Thirty, Derivatives: Practices and Principals, Washington, D.C., July 1993.

[33] It is important to note that under the Commodity Exchange Act, certain interest rate instruments, currency instruments, equity instruments, and commodity instruments are all considered a type of financial commodity.

Chart 2

Value of an Option Contract



The value of an option contract (heavily shaded line) is composed of its "intrinsic" value - the payoff on the option at expiration - plus its "time" value - the value attributable to the volatility in the underlying over the remaining life of the option. The "hockey stick" profile shown by the other line reflects the intrinsic value of the option. The curved line represents the value of the option at some time prior to expiration

interest rate an institution must pay without locking in a fixed rate, thereby maintaining benefits from downward interest rate movements. For this protection from rising interest rates, the client pays a premium up front. Once the upfront premium is paid, no further payments are expected from the purchaser of the option. If the covered interest rate (reference rate) rises above the cap rate (strike rate), the seller of the cap pays the purchaser an amount of money initially agreed upon. At each payment date, the seller must pay the buyer an amount based on the difference, if positive, between the current market reference rate and the cap rate. A cap can be thought of as a series of put options on the price of a short-term security. **For example, a bank could sell a cap to a client, independently of a floating borrowing arrangement between the client and the bank, which would "cap" the client's exposure to higher borrowing costs if interest rates were to rise.**

b) Floor: The opposite of a cap, a floor is an interest rate protection product which allows a purchaser to protect the rate of return on a floating rate asset by setting a minimum floating rate that must be received on the asset. Floors can be used to guarantee an investor's return on a floating rate asset without limiting the benefits of upward rate movements. For this protection from falling interest rates, the investor pays a premium up front. Once the upfront premium is paid, no further payments are expected from the purchaser of the option. If the covered interest rate (reference rate) falls below the floor rate (strike rate), the seller of the cap pays the purchaser an amount of money initially agreed upon. At each payment date, the seller must pay the buyer an amount based on the difference, if positive, between the floor rate and the current market reference rate. If the reference rate is above the floor rate, no payments are made under the agreement and the investor enjoys yields at market rates. **For example, a bank which has floating interest rate income from floating rate loans it has made would be adversely affected by declining interest rates. The bank could therefore purchase an interest rate floor to protect it against falling interest rates. As interest rates fall below the floor rate, the payment received from the floor would offset any lost earnings due to declining interest rates.**

c) Collar: Purchasing a collar is the equivalent of purchasing a cap and selling a floor. A collar allows an institution to protect against rising rates while reducing the cost of buying the cap by the premium received from selling the floor. The purchaser of the collar agrees to make payments to the seller in the event that the interest rate index chosen falls below the predefined lower strike level, but the purchaser of the collar receives payments from the seller in the event that the interest rate index chosen rises above the upper strike level. This combination of the purchase of a cap and the sale of a floor creates a collar, or band, within which a variable rate index will float. The price of the collar is the amount paid for the cap, minus the price received for the floor. A collar can often be structured at cap and floor strike levels so that no upfront premium is required.

(ii) Currency Option

A currency option is based on the right to buy or sell an underlying currency asset at a specific price. A currency option can be customized (OTC) or standardized (traded on an exchange). A currency option can be an option on an underlying physical instrument (a currency) or can be an option on a currency futures contract. Typically, options on an underlying physical instrument are OTC. All options on futures are exchange-traded and regulated by the CFTC. An example of an exchange-traded currency option is a Yen/US$ Futures Option (on the IMM).

(iii) Commodity Option

A commodity option is based on the right to buy or sell an underlying commodity asset, such as gold, silver, platinum, corn, wheat, oil, etc., at a specific price. A commodity option can be customized (OTC) or standardized (traded on an exchange). A commodity option can be an option on an underlying physical instrument (an agricultural or non-agricultural commodity) or can be an option on a commodity futures contract. All options on commodity futures are exchange-traded and regulated by the CFTC. Unlike other options, OTC options on commodities are generally prohibited, with certain exceptions. OTC options are allowed on some commodities, not including domestic agricultural, for those options in which a commercial user of the commodity is involved (see, 17 CFR 32.4). No OTC options are allowed for domestic agricultural commodities, even if a commercial user of the commodity is involved. An example of an exchange-traded commodity option is a Corn Futures Option (on the CBOT). Commodity options are typically broken down into a) energy futures; b) precious metal futures; and c) agricultural futures, both domestic and international soft.

> **Farmers use options on commodities[34] in order to establish a minimum price they will receive for their crops they are planning to sell in the future. For example, if a wheat farmer is planning to sell his wheat into the market in nine months, he may wish to hedge against a drop in wheat prices by buying a put option in order to guarantee that he will receive at least a certain price for his wheat in nine months. Unlike in a futures contract, the farmer will still be able to enjoy a rise in wheat prices. For example, a wheat farmer may buy a put option which allows him to sell, and obligates the other party to buy, 40,000 bushels of wheat at $3/bushel if the farmer exercises his option. The farmer will only exercise his option if the price of wheat is below $3/bushel in nine months. If the market price of wheat is only $2/bushel in nine months, the farmer will exercise his option and sell wheat to the other party for $3/bushel ($120,000), instead of $2/bushel ($80,000). (Or the other party can choose not to take physical delivery of the wheat and instead settle the trade in cash by paying the farmer $1/bushel ($40,000), and the farmer would subsequently sell his wheat in the market for $2/bushel ($80,000) for a net receipt to the farmer of $120,000.) If the market price of wheat is $4/bushel in nine months, the farmer will not exercise his option and will instead sell his wheat in the marketplace for $4/bushel ($160,000). The receipt of $160,000 is decreased by the amount of money the farmer had to pay for the put option.**

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[34] The strategy of buying put options, according to the CFTC, "lies at the heart" of the Options Pilot Program authorized by the Food, Agricultural, Conservation and Trade Act of 1990 in an attempt to get farmers to use put option contracts for income and price support.

(iv) Equity Option

An equity option is based on the right to buy or sell an underlying equity asset, such as a particular stock or stock index, at a specific price. An equity option can be customized (OTC) or standardized (traded on an exchange). An equity option can be an option on an underlying physical instrument or can be an option on an equity futures contract. Typically, options on an underlying physical instrument are OTC and regulated by the SEC. All options on futures are exchange-traded and regulated by the CFTC. An example of an exchange-traded equity option is a S&P Futures Option (on the CME).

(b) Other Types of Options

(i) Swap Options (or Swaptions)

A swaption is an option on a swap. It gives the buyer the right, but not the obligation, to enter into a specified swap contract on or before a specified future date. A borrower can buy protection against the effect of a general rise in interest rates through the purchase of an option to enter into an interest rate swap. Swaptions play an important role in the management of corporate debt, especially callable debt. All swaptions are OTC derivatives.

(ii) Embedded Options

An embedded option is an option which is part of, or embedded in, other financial instruments. The most frequently encountered embedded options are callable bonds, and bonds with equity warrants attached. Other embedded options include putable bonds, and convertible securities.

(iii) Average Rate Options

An average-rate call option pays to the purchaser at expiration the difference between the exercise price and the average price of the underlying asset during the life of the option, if the latter is greater. Average rate options were originally designed for commodity markets in which market liquidity can be unreliable. In illiquid markets, either option counterparty could be hurt by a large price move on the expiration date. The average rate option reduces the importance of a single movement on the price. It thus protects options market participants against distortions in the asset price resulting from thin markets. Average rate options are most often written on foreign exchange and physical commodities.

(iv) Barrier Options

Barrier options are either created or canceled when the spot exchange rate reaches a certain level called the barrier. For example, a down-and-out call option is an otherwise standard call option which is canceled if the underlying price falls, even briefly,

to the barrier. Barrier options on foreign currencies are particularly common.

(v) Lookback Options

A lookback call option pays the difference between the spot price of the underlying asset at expiration and the lowest price reached by the underlying asset during the life of the option. A lookback put option pays the difference between the spot price of the underlying asset at expiration and the highest price reached by the underlying asset during the life of the option. Lookbacks were initially conceived as a stock market timing device which would enable the investor to purchase an equity exposure retroactively at its lowest price and sell it retroactively at its highest price. They are relatively infrequently encountered in practice.

(vi) Compound Options

Compound options are options on options, i.e., options which give the holder the right, but not the obligation, to purchase a specific standard option at a specific price. They are used by financial and nonfinancial institutions to manage contingent exposures at a lower cost than simple options.

Other Uses of Options

Options can be used for hedging or speculation. As for hedging, the asymmetric payoff profile of an option is a unique feature that makes it an attractive hedging vehicle. For example, an investor with a long position in an underlying asset (the investor owns the underlying asset) can buy a put option to offset losses from the long position in the underlying asset if its price falls. In this instance, the investor's position in the asset will be protected at the strike price of the option, and yet the investor will still gain from any rise in the underlying asset's value above the strike price. This protection against loss combined with the ability to gain from appreciation of the asset's value comes with a price -- the premium the investor pays for the option. In this sense, the purchase of an option to hedge an underlying exposure is exactly analogous to the purchase of insurance.

The types of options available correspond to the underlying asset one wishes to hedge, such as a hedge against (a) changes in interest rates; (b) changes in currency exchange rates; (c) changes in commodity prices; and (d) changes in equity, or stock, prices.

Banks typically use interest rate and currency options, vs. commodity or equity options. These options can be used in hedging activities, in bank dealer activities, or in trading activities. Options are used by banks to hedge various interest rate and currency risks, to enhance returns on specific instruments, and to speculate on price movements. According to OCC guidelines,[35] speculation by banks using options should be done only

[35] Office of the Comptroller of the Currency, An Examiners Guide to Investment Product and Practices.

by those banks with strong capital and the level of risk management sophistication necessary to manage the activity. The OCC further states the "management must be able to explain the reasons for their options strategies. The line between hedging and speculating is often thin."

Institutions that speculate in options, primarily exchange-traded options, seek to profit from changes in the price of the underlying asset. For example, if an institution believes that the price of the underlying asset will increase, it could buy a call option. As the price of the underlying asset increases over the strike price, the institution will profit if it exercises the option. Conversely, the institution can take advantage of an expected price decline in an underlying asset by buying a put option. Accordingly, as the market price of the underlying asset decreases below the strike price, the institution can "put it back" to the seller at a price higher than the market price by exercising the option.

Equity options are being used to structure OTC products which guarantee a specific return. These "guaranteed return" products are marketed to retail investors who have seen their income from cash deposits decline over the past year as a result of the drop in interest rates. These kinds of products, which rely on derivatives for their ability to outperform the underlying equity market, are widespread in the U.S. but are relatively new in Europe.[36]

Some institutions write (or sell) options to generate income from premiums. This is a particularly risky strategy if writing naked options. Naked option writing is writing an option without an offsetting position in the underlying asset. For example, under a naked call option, the risk is that the price of the underlying asset will rise above the strike price (the option will be exercised) and the writer will lose the difference between the market price and the strike price. Likewise, under a naked put option, if the price of the underlying asset falls below the strike price, the writer will lose the difference between the strike price and the market price.

[36] Sharpe, Antonia, "Equity Products: Hedge Against Stock Swings," The Financial Times, October 20, 1993.

4. PARTICIPANTS IN THE FINANCIAL DERIVATIVE MARKETS

There are at two broad categories of participants in the derivative markets. First, "intermediaries, or dealers", and second, "end-users". In principle, these two classes of participants are distinguishable by their motivations. In practice, some participants act in both capacities.[37]

a. Dealers

Dealers cater to end-users by entering into derivative transactions with them, thereby "making markets" in derivatives. By having dealers act as counterparties in most transactions, end-users are relieved of the task of finding another end-user with whom to enter into a customized derivative transaction. In practice, some participants act as both end-users and dealers. A vast majority of the derivative transactions between a dealer and an end-user customer are "customer-driven" in that they are entered into for the purpose of reducing risk to the customer's business.

When OTC derivatives were originally developed, dealers acted primarily as brokers in derivative transactions. As brokers, the dealers did not act as a counterparty in a transaction as they do today but instead found counterparties with offsetting requirements to enter into the transaction with each other. The broker negotiated on behalf of the two counterparties and, in turn, earned a fee.

The institutions acting as brokers then began to act as dealers, offering themselves as a counterparty to a transaction in order to meet a need of a customer. The transactions, however, were immediately matched or hedged by entering into an opposing transaction. Each pair of transactions was dealt with separately and discretely. This new role, however, required a commitment of capital since dealers now faced credit risk and some market risk.

Dealers then began to "warehouse" derivative transactions. Dealers would temporarily hedge a swap, for example, with a cash security or a futures position until an offsetting or "matched" transaction could be found to replace the temporary hedge.

Today, dealers have moved from the "warehouse" approach to a "portfolio" approach, wherein a dealer places each transaction with a customer into its portfolio or book of derivatives and manages the net or residual risk of its overall position. Each new transaction is decomposed into its component cash flows and risk factors and is aggregated with all previous transactions.[38]

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[37] Many of the purposes for which end-users and dealers utilize derivatives are discussed in Section A.3.: Definitions and Purposes of Derivatives.

[38] Group of Thirty, Derivatives: Practices and Principles, Washington, D.C., July 1993.

(1) Types of Dealers

Dealers include major money-center U.S. banks,[39] foreign banks, investment banks (securities firms), insurance companies, and highly-rated corporations (primarily energy companies). A membership list of the International Swaps and Derivatives Association (ISDA) which represents most derivative dealers as well as some end-users, is contained in **Appendix A**.

According to industry sources, the U.S. banks who currently deal in derivatives are Bankers Trust, Morgan Guaranty Trust Co., Citibank NA, Chase Manhattan Bank, Chemical Bank, Bank of America, First National Bank of Chicago, and Continental Bank NA. Two other bank dealers who account for less of the size and volume are NationsBank and Bank of New York. All other banks are end-users.

High credit rating and sophistication requirements limit the number of banks and other firms who act as dealers.

According to industry sources, examples of securities firms who actively engage in derivative dealing include Morgan Stanley, Goldman Sachs, Merrill Lynch, Salomon Brothers, First Boston, and Lehman Brothers. This list is not intended to be exhaustive.

According to industry sources, examples of foreign banks, or subsidiaries thereof, who actively engage in derivative dealing include Banque Paribas, Credit Suisse Financial Products, Barclays Bank, Deutsche Bank, Mitsubishi, UBS, Union Bank, Natwest, Swiss Bank, and Sumitomo Bank. The complete list of foreign bank dealers is quite extensive.

According to industry sources, the insurance companies who currently deal in derivatives are American International Group Inc. (AIG)[40] and General Re.

Securities firms who currently deal in derivatives conduct many of their derivative dealing activities in unregistered affiliates or in offshore affiliates, not subject to the SEC's Net Capital Rule. The derivative dealing activities conducted in an unregistered affiliate are those activities interpreted by the securities firm not to be securities activities. The derivative activities typically considered by securities firms not to be securities activities include the dealing of most swaps, primarily interest rate and currency swaps, and certain other OTC derivative instruments. Futures and options on futures are regulated by the CFTC, are not considered securities, and are typically traded in affiliates registered with the CFTC, namely Futures Commission Merchants (FCMs). The SEC monitors the risks posed by the activities of unregistered affiliates through its risk assessment program. Specifically, pursuant to the Market Reform Act of 1990,[41] the SEC adopted risk assessment recordkeeping and reporting rules that provide the SEC with an overview of the financial and securities activities of affiliates that are likely to

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[39] Derivative dealing in practice does not take place at a bank holding company level, but takes place at a bank subsidiary level.

[40] For further information on the derivative activities of AIG, see "Sultan of Swaps," Wall Street Journal, October 27, 1993, and "The Shadow War at AIG," Investors Dealers Digest, September 6, 1993.

[41] P.L. 101-432, 104 Stat. 978.

have a material impact on the broker-dealer's financial and operational condition.[42]

Securities firms use derivatives in the capacity of both a dealer and an end-user. As an end-user, securities firms can use derivatives to manage risks associated with the activities of the entire firm. Whether the derivative activity is conducted inside or outside an unregistered affiliate depends upon, among other things, the legal requirements of the derivative instrument being used and the capital charge associated with the transaction.

The state-chartered U.S. banks who currently deal in derivatives are all FED-member banks and are chartered in the state of New York. These banks are Bankers Trust, Morgan Guaranty Trust Co., Chemical Bank, and the Bank of New York. Each of the banks is regulated by the State of New York Banking Department and the FED. The FED also regulates any activities that may be conducted at the holding company level.

National banks who deal in derivatives are regulated by the OCC. These banks are Citibank NA, Chase Manhattan Bank, Bank of America, First National Bank of Chicago, Continental Bank NA, and NationsBank. The FED also regulates any activities that may be conducted at the holding company level.

Currently, the major dealers of derivatives are, in general, sophisticated, have high credit ratings, and build their business primarily based on customer relationships and customer service. However, both the regulators and the industry must keep a watchful eye on new entrants and second-tier dealers. Second-tier dealers, primarily securities firms, do exist in the market place and have caused no particular problems to date. It was stated to the Minority Staff in one meeting with a primary dealer in New York that "there are farmers and miners." The dealers who are "farmers" build their derivatives business by cultivating client relationships. The dealers who are "miners" build their business by excavating the market thereby entering into as many transactions as possible, regardless of the worth of the transactions to the customer.

(2) Bank Dealing Activity[43]

According to an S&P analyst, in a paper which discussed the derivative activities of eight banks who deal in derivatives:[44]

> "U.S. money-center banks have profited immensely from the development of derivatives businesses -- forwards, swaps, options, futures -- over the last decade. As major market makers or dealers, banks now derive a substantial amount of their earnings from the business -- most welcome as a replacement for the net interest income from investment-grade loans of bygone years."

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[42] 17 CFR §§240.17h-1T and 240.17h-2T. See Securities Exchange Act Release No. 30929 (July 16, 1992), 57 FR 32159.

[43] Many of the purposes for which dealers utilize specific derivative instruments are discussed in Section A.3.: Definitions and Purposes of Derivatives.

[44] Azarchs, Tanya, "Banks Face Manageable Risks in Derivative Businesses," CreditWeek, Standard and Poor's Corporation, November 1992.

"The derivatives business can be seen as a replacement for the old interest income money-center banks enjoyed from their top-tier clients, who have since turned directly to the commercial paper and other securities markets to obtain funds. The cash flows from interest-rate swaps, for instance, resemble cash flows from lending activities: the bank collects monies based upon one rate schedule, while paying out monies on another schedule. For example, on a fixed/floating interest rate swap, the bank may receive from its counterparty a fixed rate on a given notional amount, which is analogous to a loan amount, while receiving a floating rate on a like notional amount from that same counterparty. Of course, income from derivatives is accounted for on a mark-to-market basis. Nevertheless, most income comes from a different kind of spread -- the bid/offer spread on contracts. Prices of contracts conceptually represent the present value of expected net cash flows that are amortized over the life of the contract."

"This spread income has been fairly stable and dependent more on volume than on rate volatility. Some additional earnings on the float from payments received but not yet paid out is recognized in interest income. These stable sources of income [from derivatives dealing] should be viewed as good-quality earnings for banks (emphasis added)."

Banks such as Bankers Trust and Morgan Guaranty Trust Co. have developed large and sophisticated derivative dealing businesses. According to an article in American Banker (August 10, 1993) "...Many corporate treasurers regard the bank [Bankers Trust] as the most innovative player in the market...in the past few years, Bankers Trust has abandoned lending as a major source of revenue, reshaping itself as a risk manager." All of the banks who currently deal in derivatives are sophisticated, have heavily invested in the requisite technology and expertise, currently appear to be adequately capitalized under regulatory standards, and have extensive credit appraisal experience.

Dealers can also purposely retain some of the risk in their derivative portfolios by not entering into offsetting transactions, thereby expressing market views (speculating) in the expectation of profiting from favorable movements in prices or rates. Dealers can also speculate by buying and selling exchange-traded derivatives.

Dealers may also provide an arbitrage function in the derivative markets by identifying and exploiting anomalies between derivatives and underlying cash (e.g., bond and stock) market instruments, thereby enhancing market liquidity and pricing efficiency.

(3) Management of Risk

Dealers manage and hedge the risks transferred from the end-user which enables them to custom-design a hedging strategy for the specific needs and objectives of the end-user. Dealers manage their derivatives using a "portfolio" approach, wherein a dealer places each transaction with a customer into its portfolio or book of derivatives and manages the net or residual risk of its overall position. Each new transaction is decomposed into its component cash flows and risk factors and aggregated with all previous transactions. Dealers can manage their portfolio by entering into other OTC

derivative transactions, by buying and selling exchange-traded derivatives (which are more liquid and standardized than OTC derivatives), and by using the cash markets (e.g., bond and stock). As a simplified example of risk management, a dealer can neutralize the risk of a derivative transaction entered into with a customer by entering into a subsequent "offsetting" transaction (with another customer) which has the opposite risks as the first. Dealers also use derivatives to manage the assets and liabilities that arise from other business functions of the firm (in addition to the derivative dealing function).

(4) Income Generated from Dealing

Dealers generate income from transactions fees, bid-offer spreads, and their own trading positions. A spread is the difference between the bid and the offered price, or yield in the quotation of a security. For example, if a dealer enters into two offsetting fixed-for-floating swaps in order to effectively set up Counterparty A and Counterparty B in the swap, then the dealer makes a profit by receiving a higher fixed rate (e.g., Treasury note yield plus a swap spread) in the first swap than it is paying out in the second swap. The difference between the fixed rate received (offer) and that paid out (bid) is called the bid/offer spread. Ideally, a market maker tries to make profits by establishing offsetting positions, so that the market exposure is zero, while collecting the bid/offer spread. However, part of the difficulty in being a market maker is that the dealer will not necessarily find Counterparty B at the same time that the swap with Counterparty A is entered into.

It is important to distinguish between the swap spread and the bid/offer spread. The swap spread in a fixed-for-floating swap is the spread over the Treasury yield to pay or receive fixed. This adjustment must occur because of the credit differential between the risk-free government rate and the floating rate, typically the interbank LIBOR rate. The supply and demand for fixed-rate funds also influences the swap spread. In contrast, the bid/offer spread is the difference between the fixed rate which must be paid to the market maker and the fixed rate the market maker will pay. Dealers quote prices on OTC derivatives, such as swaps, based on the terms of the swap and prices are quoted on screens provided through vendor services, such as Reuters and Bloomberg. However, there is no other easily accessible market data for OTC derivatives. Dealers may also earn a return for designing a derivative instrument to meet a customer's specific need.

(5) Credit Rating/Separately Capitalized Subsidiaries

The risks incurred by entering into a derivative transaction include credit risk, market risk, settlement risk, operating risk, liquidity risk, legal risk, interconnection risk, and systemic risk.[45] Sources state that the largest risk in an OTC transaction may be credit risk (the risk that a counterparty will default). However, both the dealers and end-users of OTC derivative transactions are typically highly rated. Collateral can also be posted. The credit risk arising from derivatives is the same credit risk that banks face in their normal function of extending loans. The evaluation of credit risk in a derivative transaction is typically the same as that which is used to analyze the credit risk associated

[45] Risk is discussed in Section B.: Risks Arising from and Risk Management of Derivative Product Transactions.

with making loans. Typically, overall credit limits are set for a customer, regardless of the product. This credit limit includes all transactions entered into with the customer, including both loans and derivative transactions. Overall, according to industry sources, the credit risk incurred by entering into derivative transactions is a small fraction of the credit risk incurred by extending loans.[46]

The credit rating of a dealer is very important. Morgan Guaranty Trust Co., for example, has a triple A credit rating. According to industry sources, certain foreign and domestic banks have seen the level of their derivative dealing activity decline because of credit quality problems and corresponding lower credit ratings. Several derivative dealers have created special purpose enhanced derivative product companies (DPCs) in order to offer their customers a highly rated counterparty for derivative transactions.[47]

The investment banks who have formed triple A-rated DPCs are:

(a) Merrill Lynch, who formed Merrill Lynch Derivative Products Inc.;

(b) Goldman Sachs, who formed GS Financial Products International L.P.;

(c) Salomon Brothers, who formed Salomon Swapco.

The only bank who has formed a DPC is Banque Paribas, who formed Paribas Capital Markets Group.

Several insurance companies also have formed separate subsidiaries to conduct derivative dealing activities. These insurance companies are AIG Financial Products and General Re Financial Products Corporation. Although these subsidiaries currently have triple A credit ratings, their rating is linked to the financial health of their parent.

An enhanced DPC is a subsidiary of a financial services firm that can be rated higher than its parent. The subsidiary is not a registered broker-dealer with the SEC as only those activities determined not to be securities trading are conducted in the DPC. The Net Capital Rule's conservative treatment of unsecured credit risk, which is present in most OTC derivative products, is one of the reasons given for segregating derivative activities from other securities-related activities conducted by registered broker-dealers. The credit rating of the DPC can be enhanced above that of the parent in part because capital is segregated in a separate subsidiary.

Credit rating agencies tend to require that the capital of a triple A rated DPC be able to withstand the most extreme stress scenarios involving severe market movements. A DPC must also be legally separate from its parent so that it will not be combined or consolidated with the parent in the case of bankruptcy or insolvency of the parent.

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[46] See **Chart 14 in Section B.1.a.: Measuring Credit Exposure.**

[47] For a complete discussion of DPCs, see Standard & Poors May 18, 1992 Credit Comments issue entitled "Credit Sensitivity Spurs Enhanced DPC Growth" written by Lisa M. Raiti. See also Moody's Special Comment from the Financial Institutions Group dated June 8, 1993 entitled "Moody's Assessment of Derivative Risk" written by Douglas Lucas. See also the July 1993 Group of Thirty Report entitled Derivatives: Practices and Principles. See also Moody's Structured Finance Issue dated November 1991 entitled "Moody's Rates Counterparty Risk of Merrill Lynch Derivative Products, Inc. Aaa" written by Douglas Lucas and Paul Stevenson. See also "Wall Street's Triple-A for Effort" in the May 1993 issue of Institutional Investor written by Peltz. See also "Can Triple-A Subs Live Up to Their Billing?" in the November 2, 1992 issue of Investment Dealers' Digest written by Liebowitz.

DPCs also operate under strict guidelines and exposure limits in order to maintain their rating. Triple A rated DPCs are also restricted by the rating agencies from taking open or unmatched position and must instead be continuously hedged. This is often accomplished by requiring that the DPC enter into a mirror transaction with its parent or an affiliate for every transaction it enters into with a third party. The DPC's exposure to the parent or affiliate may need to be fully collateralized.

Contained in SEC Concept Release No. 34-32256 dated May 4, 1993 regarding the Net Capital Rule, the SEC asked for comment on DPCs. Assuming DPCs are registered with the SEC pursuant to the Exchange Act (they are currently unregistered), the SEC invited commentators to discuss whether Rule 15c3-1, the net capital rule, should be amended to recognize DPCs as a special class of broker-dealer with rules specific to their business. If so, the SEC asked from what provisions of Rule 15c3-1 should DPCs be exempt. Comments were also solicited on the impact, if any, of such exemptions on the objectives of the Securities Investor Protection Act of 1970 (15 USC 78aaa). The SEC asked if the current financial responsibility rules are appropriate for DPCs, and what modifications to the rules are necessary to insure that the rule adequately addresses the special requirements of DPCs.

Also regarding subsidiaries, Question #11 posed to the regulators by Representative Leach asked the regulators to comment on whether institutions, both dealers and end-users, should be **required** to establish separately capitalized subsidiaries to conduct derivative activities. The general consensus among regulators was that such subsidiaries are not necessary and would not be beneficial. For example, the OCC stated that it "does not believe that national banks should be required to establish separately capitalized subsidiaries to conduct derivative activities ... Requiring banks to establish separately capitalized subsidiaries to conduct derivative activities would impose costs that could be high enough to prevent certain banks, particularly small end-user banks, from engaging in derivative activities that would enable them to enhance their safety and soundness by more effectively managing their risk." In addition, the FED stated that "the primary reason for requiring banks to conduct certain activities in separately capitalized subsidiaries is to shield the bank from the risk of loss that might result directly from activities that pose more than normal risk. Experience to date does not suggest that derivative activities expose banks to risks of sufficient magnitude that they should be required to establish separately capitalized subsidiaries to conduct these activities. In fact, derivative activities have been a consistent source of profitability for the banking industry." The OTS stated that "savings associations are involved with derivatives as end-users rather than as dealers. There does not appear to be any reason to require end-users to conduct derivative transactions in separately capitalized subsidiaries, as such a practice would make it impossible to use derivatives to hedge the risks of a particular subsidiary."

b. End-Users

The second broad category of participants in the derivative markets is "end-users." End-users typically enter into derivative transactions to, among other things, hedge and manage risk, manage assets and liabilities, reduce financing costs, diversify sources of funding, increase the yield on certain assets, and enhance liquidity of certain assets. (To hedge is to take a position which offsets an existing or anticipated exposure to a market price movement. A "perfect" hedge will eliminate the possibility of a future gain or loss.) End-users do not enter into derivative transactions for the purpose of making money in the form of fees or spreads. Financial institutions and other businesses have found an increasing need to alter their exposure to price and interest rate movements both quickly and cheaply in response to the rapidly changing global market environment. Derivatives make it feasible, for example, for thrifts and banks to make loans with maturities and pricing characteristics that they otherwise would not make because of risk considerations.

End-users utilize derivatives by either entering into OTC transactions (typically with a dealer) or by buying and selling exchange-traded derivatives. A vast majority of the derivative transactions entered into between an end-user customer and a dealer are "customer-driven" in that they are entered into with a customer for the purpose of reducing risk to the customer's business. In fact, companies have been sued by their shareholders for not using derivatives to hedge.[48] Derivative transactions are not a zero-sum-game in that both parties in a derivative transaction may benefit from the transaction.

According to industry sources, speculation using derivatives does exist but is a smaller portion of the overall activity and risk, especially as used by financial institutions. Due to the dynamic nature of market development and technological advances, however, constant supervisory attention to derivative activities must be maintained. Speculators, including certain investment funds who "specialize" in speculation, hope to profit by accepting the risk that stems from taking outright positions in derivatives in anticipation of price movements. Such risks offer the opportunity for large gains as well as the possibility for large losses. Arbitragers also attempt to take advantage of price movements, but focus their efforts on trying to profit from small discrepancies in price among similar instruments in different markets. By simultaneously buying and selling different instruments, arbitragers seek to capitalize on market inefficiencies while controlling price risk.

A wide variety of business enterprises are end-users. They include, but are not limited to:

(1) Financial Institutions/Banks and Thrifts;
(2) Government-Sponsored Enterprises;
(3) Sovereigns and Related Entities;
(4) Corporations;
(5) Insurance Companies;
(6) Farmers;
(7) Municipalities;

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[48] See Section H.1.: Companies Sued for Not Using Derivatives.

(8) Institutional Investors/Investment Companies including Mutual Funds;
(9) Speculators.

Dealers, such as securities firms and banks, may also utilize derivatives in an end-user capacity to manage the assets and liabilities that arise from their dealing activities as well as other business functions of the firm.

The size and scope of derivative activities, as well as expertise, of end-users varies significantly from firm to firm. Many of the software programs written to analyze and manage derivative activities, including those written by such firms as Reuters, are quite frequently sold to end-users as well as dealers.

(1) Financial Institutions/Banks and Thrifts

Financial institutions may utilize derivatives in an end-user capacity or in a dealer capacity. According to industry sources, only 10 U.S. banks and no U.S. thrifts currently act as dealers. The other banks and thrifts, therefore, only act as end-users, if at all.

Financial institutions use derivatives in an end-user capacity to, among other things:

- reduce risks (interest rate risk, currency risk, equity price risk, and commodity price risk, by hedging the balance sheet or other trading activity);
- manage assets and liabilities;
- reduce funding costs;
- enhance liquidity; and
- express market views (speculate or take a position).

Financial institutions can achieve the above goals by either entering into an OTC transaction or by buying or selling an exchanged-traded contract. As an end-user, such activity takes place in a proprietary trading account. Speculation for an institution's own account can also take place as a result of its dealer activities if the institution does not offset (or perfectly offset) a transaction it entered into as a dealer, e,g., does not offset an OTC transaction it entered into for a customer. Certain limitations apply to speculation by financial institutions.[49]

According to an S&P credit rating analyst:[50] "The derivatives business has become an important one to both banks and the economy. It carries certain risks but

[49] According to industry sources, speculation is the least common use of derivatives, especially OTC derivatives, by financial institutions.

[50] Azarcha, Tanya, "Banks Face Manageable Risks in Derivative Businesses," CreditWeek, Standard and Poor's Corporation, November 1992.

these risks are familiar to banks." And according to a Moody's credit rating analyst:[51] "In summing Moody's view of derivative risk at financial institutions, I would point out that, in the past, very few banks we rate have been materially affected by their derivative activities except in a positive way ... We don't think derivatives are a ticking time bomb for the banking industry as a whole."

Derivatives allow financial institutions to achieve their goals in a less expensive and more expedient way than by adjusting traditional assets and liabilities.

According to a report issued by the Group of Thirty on July 21, 1993 entitled Derivatives: Practices and Principles,[52] over 83% of the financial institutions responding to their survey on OTC derivatives as end-users consider derivatives either imperative (58%) or very important (25%) for controlling risk within their organizations. Of the institutions responding, 92% use interest rate swaps, 85% use cross-currency rate swaps, 69% use forward foreign exchange contracts, 69% use interest rate options, 54% use Forward Rate Agreements, 46% use currency swaps, and 23% use currency options.

Of the financial institutions responding:

- 84% indicated they use OTC derivatives for hedging market risks arising from new financings;
- 77% use them to manage their existing assets and liabilities;
- 46% use them to hedge translation (from foreign currency) exposures;
- 39% use them to offset option positions embedded in the institution's assets and liabilities (such as call or prepayment features in their loans and bonds); and
- 39% use them to hedge transaction exposures.

For Charts on Volume and Type of Derivative Activities of Financial Institutions, see Appendix B.

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[51] Lucas, Douglas, "Moody's Assessment of Derivative Risk," Moody's Special Comment, Moody's, June 8, 1993.

[52] The Group of Thirty Study is discussed in Section I.1.: Group of Thirty and in more detail in Appendix H.

(a) Banks

Banks as end-users consider derivatives important in managing their risk exposures. (Derivatives can be utilized in an end-user capacity at both the bank holding company level and the bank subsidiary level.) The effect of a change in interest rates on the market value of a financial institution's net worth depends on the relative interest rate sensitivities of its assets and liabilities, taking into account such factors as prepayment options in loans. The net worth of banks is vulnerable to changes in interest rates and shifts in the yield curve, because their assets and liabilities have different maturities and repricing characteristics. Counterparty credit risk (the risk that the counterparty will default) will arise when entering into derivative transactions. However, that credit risk is the same credit risk banks incur when extending loans. According to industry sources, the credit risk associated with derivatives is, in total, only a fraction of the credit risk arising from loans.[53] Banks record derivatives as "off-balance sheet" items.

Banks can be both end-users and dealers of derivatives. According to industry sources, only 10 U.S. banks currently act as dealers,[54] and therefore the other banks act only as end-users of derivatives. These end-user banks utilize derivatives primarily to hedge risk. High credit rating and sophistication requirements limit the number of banks who act as dealers.

According to the FDIC, state non-member banks use derivatives primarily in the context of hedging and portfolio management strategy. Even though, aside from individual state statutes, there are no legal prohibitions on speculation and trading in derivatives for a state non-member banks' own account, the size and technical expertise of such institutions generally make these derivative activities impractical. Relative to the money center banks, the use of derivatives by state non-member banks is comparatively slight.

Banks aiming to reduce their risk can, through proper use of derivative instruments, disaggregate the risks that are often found in traditional instruments, and transfer such risks to parties that are better suited or more willing to take on and manage those risks. Some derivative transactions also enable banks to reduce their costs through financial arbitrage. A bank may borrow in the market where it can obtain the best relative terms and then adjust its obligations to obtain the most desired financial structure. Derivatives may also be used to alter the payment or maturity structure of available funding sources to more closely match those of a desired, but unavailable, source.

While most large banks are active in the interest rate and foreign exchange markets, only a handful of banks have exposures in commodities or equities. In general, banks view commodity-linked transactions as a financial risk management service for customers with commodity price exposure, similar to the foreign exchange and interest

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[53] Risk is discussed in **Section B: Risks Arising from and Risk Management of Derivative Product Transactions.**

[54] The U.S. bank dealers who account for the vast majority the derivative dealing activities by U.S. banks are Bankers Trust, Morgan Guaranty Trust Co., Citibank NA, Chase Manhattan Bank, Chemical Bank, Bank of America, First National Bank of Chicago, and Continental Bank NA. Two other bank dealers who account for less of the size and volume are NationsBank and Bank of New York. The derivative dealing activity in practice takes place. (Four of the ten dealers are state-chartered in New York, namely, Bankers Trust, Morgan Guaranty, Chemical Bank, and Bank of New York. The other six are national banks.)

rate risk management products that banks have historically offered. These transactions are tailored to a customer's needs (are OTC) and therefore offer more flexibility than exchange-traded contracts, particularly for longer-term price insurance.

In general, the relative use of different derivative instruments by banks and the different functions for which they are used vary from bank to bank based on customer demand, market conditions, competition, and the extent of the bank's dealer activities. Larger banks engage in large amounts of sophisticated functions involving a wide variety of complex derivative instruments, such as cross-currency interest rate swaps, while smaller banks are more likely to be involved in "plain vanilla" derivative transactions (such as exchange-traded futures, fixed/floating interest rate swaps, and interest rate caps and floors) for risk management purposes.

As of March 1993, 215 of the 1,154 bank holding companies reported some form of derivative activity. (This activity is for the consolidated bank holding company, and therefore includes derivative used at both the bank holding company level and subsidiary level, in both an end-user and dealer capacity.) Of 1,154 holding companies:[55]

- 151 companies (10%) reported use of interest rate swaps;

- 120 companies (8%) reported commitments to purchase foreign exchange in the form of spot, forward, and futures contracts. The foreign exchange activities of most of these institutions are limited to spot and forward contracts; and

- the number of institutions that engage in all other types of derivative activities is much smaller than those for swaps or foreign exchange. Only 13 companies (1.1%), for example, report any holdings of commodity or equity swaps.

Large institutions dominate the banking industry's activity in the derivative markets, with the 10 largest holding companies, ranked by the notional value of derivatives, holding over 90% of total derivatives reported by U.S. bank holding companies. See **Table 1** for the derivative holdings of the 10 holding companies with the most derivative contracts. In terms of notional amounts, most bank involvement in derivative contracts is comprised of interest rate swaps (22%), domestic futures or forward rate contracts (19%), and spot, future, or forward foreign exchange contracts (34%). Bank involvement in commodity and equity contracts represent less than 2.2% of the reported total. In all cases, the volumes represent contracts in which the reporting institution served as a principal to the transaction; brokered transactions are not reported.

The replacement cost (the measure of counterparty credit risk) of derivative contracts reported by banking institutions amounted to about 1.4% of the notional amount as of June 30, 1993.

[55] Source: Federal Reserve Board.

Table 1

10 HOLDING COMPANIES WITH THE MOST DERIVATIVE CONTRACTS

June 30, 1993, Notional Amounts, $ Millions

Rank	Holding Company Name	State	Assets	Total Derivatives	Total Futures & Forwards	Total Swaps	Total Options
1	CHEMICAL BANKING CORPORATION	NY	$145,522	$2,117,385	$1,245,500	$554,257	$317,628
2	BANKERS TRUST NEW YORK CORPORA	NY	83,987	1,769,947	816,740	355,597	597,610
3	CITICORP	NY	216,285	1,762,478	1,207,132	264,811	290,535
4	J.P. MORGAN & CO. INCORPORATED	NY	132,532	1,550,680	572,897	579,219	398,563
5	CHASE MANHATTAN CORPORATION	NY	99,085	1,125,075	666,150	258,086	200,839
6	BANKAMERICA CORPORATION	CA	185,466	899,783	581,034	229,926	88,823
7	FIRST CHICAGO CORPORATION	IL	49,936	452,780	276,790	100,666	75,324
8	CONTINENTAL BANK CORPORATION	IL	22,352	170,052	61,058	52,953	56,041
9	REPUBLIC NEW YORK CORPORATION	NY	36,205	164,979	81,707	45,504	37,768
10	BANK OF NEW YORK COMPANY, INC. T	NY	41,045	91,434	65,128	12,200	14,106
	Top 10 Holding Companies			10,104,592	5,574,136	2,453,219	2,077,236
	Other 205 Holding Companies			617,374	247,461	227,278	142,574
	Total Notional Amount for All Holding Companies			10,721,965	5,821,597	2,680,497	2,219,811

Note: Table includes data for companies with total assets of $150 million or more, or with more than one subsidiary bank.
Source: Consolidated Financial Statements for Bank Holding Companies (FR Y-9C)

The Use of Various Derivative Instruments by Banks

Swaps Activities of Banks: Banks primarily use interest rate swaps and currency swaps, vs. commodity swaps and equity swaps. Banks use the swaps to manage the interest rate and currency risks associated with their banking business.

Interest rate swaps: Banks use interest rate swaps to decrease their interest rate risk by changing their cash flows from fixed to floating or floating to fixed (a coupon swap) in order to more closely match their revenues from loans with their payments on borrowings. Banks may also exchange floating for floating payments (basis swap). A basis swap may be used by a bank which has its deposits tied to the commercial paper rate but its loans tied to LIBOR. Although both indices are floating, they do not have 100% correlation and could expose the bank to basis risk. The bank could enter into a swap in which it receives the commercial paper rate and pays LIBOR, thus limiting its exposure to the basis differentials between LIBOR and the commercial paper rate.

Interest rate swaps can also be used by banks to lower their cost of funds by exploiting credit spreads between the fixed and floating rate markets. Interest rate swaps can also be used by banks as fixed income trading vehicles, as can basic U.S. Treasury and corporate bonds. For example, a five year swap to receive fixed and pay floating is analogous to purchasing a five-year bond financed at the floating LIBOR rate.

> For example, Banc One is one of the largest bank end-users of interest rate swaps. Banc One uses swaps strictly to manage its own balance sheet, not as a trading vehicle or as a dealer. According to an analyst, the prime use of derivatives by Banc One is to offset an excessive asset sensitivity position due to "too many" floating rate loans. (Banc One also has a high concentration of fixed-rate deposit liabilities.) By arranging swaps that receive fixed rate and pay floating, the rate risk on the balance sheet of Banc One is neutralized. In addition, the net interest margin in 1992, for example, improved with the use of swaps. According to an analyst, the net interest margin reported as 6.3% would have been only 5.1% if all swaps were cancelled and the same hedges were placed on the balance sheet using traditional instruments.

Currency swaps: Banks use currency swaps to decrease their exposure to changes in exchange rates. If a bank has foreign operations, it can enter into a currency swap in order to more closely match its foreign currency revenues with payments on borrowings. Currency swaps also allow banks to effectively borrow in currencies most desirable to them.

Commodity swaps: In July 1989, the CFTC gave banks a broad exemption from regulation relative to swap transactions involving commodities.[56] Since the CFTC exemption, bank participation in this market has been growing rapidly. The majority of the business has been in petroleum products, specifically crude oil and heating oil. The business escalated after the Persian Gulf crisis in 1990. However, banks have begun to deal in other energy products, such as jet fuel, natural gas, and various metals. To date, the business has been concentrated in

[56] CFTC Policy Statement on Commodity Swaps, 54 Federal Register 30694 (July 21, 1989). This has been superseded by a CFTC rule exempting all swaps from CFTC regulation, 17 CFR Part 35 (June 22, 1993).

large, sophisticated institutions who appear to have the systems capability and technical expertise to manage the risks associated with these products.

Forwards Activities of Banks: Forwards are used by banks to lock in certain interest rates, exchange rates, commodity prices, or equity returns at a date in the future. Banks typically use interest rate forwards (called forward rate agreements) and currency forwards (called forward foreign exchange contracts), vs. commodity and equity forwards. According to OCC guidelines,[57] forward contracts may become more important to commercial banks with the increased activity in the commodity markets. Forwards can be used when a bank has interest rate or foreign currency exposure that exists beyond the available standardized futures terms (futures are basically a standardized forward) or has other unique characteristics. Forwards can also be used by banks for speculation. However, as described in the OCC guidelines,[58] speculating in forwards should be done only by those banks with strong capital and the level of risk management sophistication necessary to manage this type of activity.

Forward rate agreements (FRAs): FRAs are often used as a hedging instrument for bank activities that expose the bank to interest rate risk. FRAs also allow a borrower or lender to "lock in" an interest rate for a period that begins in the future, thus extending the maturity of its liabilities or assets.

For example, a bank that has limited access to funds with maturities greater than six months and has relatively longer term assets can contract for an FRA that will determine today the cost of six month funds it will receive in six months' time. In another example, a bank may have a loan to fund in three years because of a commitment made by the loan department. It may then desire to hedge against rates rising above the agreed upon funding price. The bank may enter into an FRA in which it will receive the loan price less a spread, three years into the future. This way, the bank will not be exposed to rates rising and be unable to fund the loan at a profitable rate. Large banks may employ FRAs as a trading instrument. Trading may also take the form of arbitrage between FRAs and interest rate futures or short-term interest rate swaps.

Forward foreign exchange contracts: Banks use currency (foreign exchange) forwards to lock in currency rates now for delivery in the future, and subsequently hedge against, among other things, positions arising from their foreign operations and dealing businesses. Banks also use currency forwards to hedge positions arising from their foreign exchange dealing activities. A bank that incurs foreign exchange exposure from assisting its customers (dealing) with currency risk management can use offsetting contracts to reduce its own exposure. A bank can also use forwards or futures to cover unmatched currency swaps.

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[57] Office of the Comptroller of the Currency, An Examiners Guide to Investment Product and Practices.

[58] Ibid.

Futures Activities of Banks: Banks primarily use interest rate futures and currency futures, vs. commodity and equity futures. They use such futures primarily to hedge against movements in interest rates and currency rates. Futures can be used by banks for speculation. However, according to OCC guidelines,[59] speculating in futures should be done only by those banks with strong capital and the level of risk management sophistication necessary to manage this type of activity.

Interest rate futures: Banks use interest rate futures to, among other things, lock in spreads between borrowing and lending rates. This will allow the bank to achieve greater certainty in costs and revenues. For example, a bank may sell Eurodollar futures in advance of an anticipated funding in order to lock in the cost of the funds. If LIBOR subsequently increases, the short futures position will increase in value offsetting the higher spot interest cost that the bank will have to pay on its funding. These contracts may also be used to hedge investment portfolios against yield curve shifts. For example, banks can hedge mortgage portfolios by selling futures.

Currency futures: Banks use currency (foreign exchange) futures to lock in currency rates and subsequently hedge against, among other things, positions arising from their foreign operations and dealing businesses. For example, a bank may have purchased a foreign currency denominated bond. In addition to the risks associated with domestic bonds, foreign bonds also have foreign exchange risk. If the currency in which the bond is denominated depreciates against the dollar over the term of the bond, the bank will lose money when the bond is exchanged. Therefore, if the bank enters into a futures contract to ensure a specific amount (the amount of the bond plus interest), at a specific price and at a specific time (the maturity date of the bond), the foreign exchange risk can be managed. Banks also use currency futures to hedge positions arising from their foreign exchange dealing activities. A bank that incurs foreign exchange exposure from assisting its customers (dealing) with currency risk management can use offsetting contracts to reduce its own exposure. A bank can also use forwards or futures to cover unmatched currency swaps. For example, a dealer obligated to make a series of Deutsche mark payments could buy a series of Deutsche mark futures to reduce its exposure to changes in the US$/DM exchange rate.

Commodity futures: Commodity futures are used by banks primarily to hedge commodity risk incurred from mismatches in swap positions in a dealer capacity.

Options Activity of Banks: Banks typically use interest rate and currency options, vs. commodity or equity options. These options can be used in hedging activities, in bank dealer activities, or in trading activities. Options are used by banks to hedge various interest rate and currency risks. Banks buy options to protect against adverse market movements while leaving open the possibility of capitalizing on favorable movements in interest rates and currency rates. A bank may also use options to enhance returns on specific instruments or a portfolio of instruments and to speculate on price movements. However, according to OCC guidelines,[60] speculative activity by banks

[59] Ibid.

[60] Ibid.

should be limited to banks with strong capital and the sophistication to manage the risks involved.

Interest rate options: An interest rate option gives a bank who buys an option the right to buy or sell an underlying interest rate asset, such as a government bond, at a specific price. A bank may have a Treasury bond that would drop in price if interest rates rise. In this case, it may wish to buy a put option on the T-bond giving it the right to put the bond to the option seller at a pre-determined price. If rates rise, the bank can put the bond and avoid a loss. If rates do not rise, the bank has only lost the money paid for the option. If a bank has short-term liabilities and long-term assets, it may wish to purchase a cap in order to protect itself against rising short-term rates. A cap would effectively cap the interest rate it would pay on its liabilities. If a bank has short-term assets and long-term liabilities the bank could purchase a floor to protect it from falling short-term interest rates. A floor would effectively put a floor on the rate it would receive on its assets. If the bank wanted to lock in a spread between assets and liabilities, it could buy a collar (the same as buying a cap and selling a floor). The premium earned on the floor would offset the price paid for the cap.

Currency options: A currency option gives a bank who buys the option the right to buy or sell an underlying currency asset at a specific price. A bank may have a bond denominated in Deutsche marks. If the mark depreciates against the dollar while the bank holds the bond, the bank will lose money when converting the marks to dollars. The bank may wish to purchase a put option on the mark which allows the bank to sell the mark at a given price. If the mark does depreciate, the profit on the put could be used to offset the exchange loss on the mark-denominated bond.

(b) Thrifts

Thrifts are end-users of derivatives and do not act as dealers. Thrifts use swaps and other derivatives to hedge their mortgage portfolios and manage their asset/liability exposure. Thrifts use derivatives to manage and control interest rate risk and mortgage prepayment risk. Thrifts use derivatives for many of the same reasons banks use derivatives. In principle, an institution can manage and control interest and prepayment risk by changing the structure of its asset and liability portfolios. In practice, changing the lines of business or the structure of the portfolio is often cumbersome and expensive, and derivatives can make such risk management less costly. Moreover, derivatives make it feasible for thrifts and banks to make loans with maturities and pricing characteristics that they otherwise would not make because of risk considerations.

Roughly half of all large thrifts (assets over $1 billion) use derivatives, while less than 1% of the small thrifts (assets less than $100 million) use them. As of June 30, 1993, 117 out of 1,822 private sector thrifts reported holdings of off-balance sheet derivatives. Of the 117:[61]

- 82 institutions reported holdings of swaps;
- 43 institutions reported holdings of options; and
- 20 reported holdings of futures contracts.

Thrifts use interest rate forwards and futures to, among other things, lock in spreads between borrowing and lending rates. Thrifts use options to protect against adverse market movements while leaving open the possibility of capitalizing on favorable movements of interest rates and currency rates.

Thrifts use interest rate swaps to decrease their interest rate risk by changing their cash flows from fixed to floating or floating to fixed in order to more closely match their revenues from mortgages with their payments on borrowings.

> **For example, if a thrift is receiving, in its normal course of business, a majority of its income from fixed rate interest payments on long-term mortgages (assets) it has made to customers, but is paying a majority of its obligations in short-term floating rate payments on deposits (liabilities) it has borrowed, the thrift is vulnerable to a rise in interest rates. As interest rates rise, the floating interest rate it is paying on its liabilities will rise, while the fixed interest rate it is receiving on its assets will remain the same. Consequently, the profits of the thrift will decrease as interest rates rise. And if interest rates rise to a point where the interest rate the thrift is paying on its liabilities exceeds the interest rate it is receiving on its assets, the thrift may lose money. (This is what happened to many S&Ls in the late 1970s and early 1980s.)**
>
> **In this case, the thrift may wish to increase the percentage of floating rate asset payments it receives while increasing the percentage of fixed rate liability payments it makes by entering into a fixed for floating interest rate swap. Under the swap, the thrift would receive payments from another party based on a floating rate, and, in return, pay to another party payments based on a fixed rate. After the swap, the thrift would be more closely "matched" because a certain portion of its payments on both its assets and liabilities would be based on a floating rate; therefore, if interest rates rise, not only would**

[61] Source: Office of Thrift Supervision.

the thrift be paying a higher rate on its floating rate liabilities, but also it would be receiving a higher rate on its floating rate assets, therefore decreasing its vulnerability to rising interest rates. (The other portion of the thrift's payments on both its assets and liabilities would be more closely matched on a fixed rate basis.)

The use of derivatives has enabled thrifts to better satisfy consumer demands for specific types of products, such as fixed-rate mortgages, by enabling thrifts to better manage the risk associated with those products.

The introduction of derivatives has provided the thrift industry with additional tools for managing interest rate risk. Prior to the introduction of derivatives, risk-return tradeoffs were managed primarily by altering the mix of an institution's portfolio of assets and liabilities. For example, an institution that wanted to reduce its exposure to rising interest rates might have lengthened the duration of its liabilities by replacing short-term borrowings with long-term borrowings. Today, a thrift can effectively accomplish the same result at a lower cost by entering into an interest rate swap. Most thrifts that use derivatives have used them safely. Based on a survey of OTS examiners, derivatives contributed to less than 2% of thrift failures in the last five years, and were rarely a primary cause of failure.[62]

Thrift Crisis of the 1970s and 1980s.[63] The thrift industry's outsized exposure to interest rate risk in the late 1970s and early 1980s was a key factor in precipitating the thrift crisis. Until the late 1970s, interest rates were relatively stable, and the average rate paid on savings deposits rarely rose above the rate earned on mortgages. As a result, borrowing short and lending long worked reasonably well. However, when interest rates surged in the late 1970s and early 1980s, the thrift industry experienced sharply higher funding costs. Industry profitability plunged and turned negative in 1981 and 1982. If the derivative markets had been well developed 15 years ago, S&Ls that had the objective of reducing their risks may have been able to use derivatives to substantially reduce the losses they suffered in the late 1970s and early 1980s. (The full development of interest rate swaps did not occur until 1981). According to the CFTC, for example: "There is little question that knowledgeable use of derivative products such as interest-rate futures, options and swaps could have eased the financial strain that many S&Ls endured as a result of this increase in interest-rate volatility. This potential utility was evidenced by federal bank and S&L regulators who early on approved the use of interest-rate futures and options for purposes of reducing interest-rate risk exposure. Of course, at the time that the crisis was developing, so were the markets for these instruments; and expertise concerning their appropriate use for offsetting interest-rate risk is at a premium both among practitioners and regulators."

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[62] It should be noted that a least one institution, Franklin Savings, under OTS jurisdiction, had a large derivatives book at the time it failed in 1990. Significant controversy surrounded the OTS' determination of Franklin's insolvency.

[63] See Question #3 posed to the regulators by Representative Leach.

(2) Government-Sponsored Enterprises

U.S. government-sponsored enterprises (GSEs) use derivatives to manage interest rate and currency risks. The GSEs are the Federal Home Loan Banks (FHLBB), the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac), the Student Loan Marketing Association (Sallie Mae) and the Government National Mortgage Association (Ginnie Mae or GNMA). The Federal Agricultural Mortgage Corporation (Farmer Mac) has the authority to use derivatives but has not utilized them to date. The lower cost of funds at the GSEs, made possible by the growing use of derivative instruments, has provided more affordable housing and less-expensive student loans while decreasing taxpayer exposure to GSEs.

Federal Home Loan Banks

The Federal Home Loan Banks (FHLBs) in conjunction with the Federal Housing Finance Board (FHFB) use derivatives to hedge their interest rate risk and manage their duration gap. The fundamental business of the Federal Housing Finance System is to provide member institutions with advances in a wide range of maturities and terms. Funds not immediately required for the FHLBs' credit programs are invested. The principal sources of funds for theses activities are consolidated obligations and member deposits. However, lending and investing these funds has the potential for exposing the FHLBs to credit and interest rate risk.

> According to the FHFB's 1992 annual report: "Interest rate risk is the risk that changes in interest rates may adversely affect an institution's financial condition. The FHLB system protects against interest rate risk in several ways. When a member prepays an advance, the FHLB could suffer losses if the principal portion of the prepaid advance must be invested in lower yielding assets that continue to be funded by higher cost debt. To protect against this risk, each FHLB is required by regulation to charge a prepayment fee that makes it financially indifferent to a borrower's decision to prepay an advance. In addition, the FHLBs use interest rate swaps and other hedging vehicles and issue financial instruments with embedded options such as call features, to protect against changes in interest rates."
>
> "In connection with their interest rate risk management programs, the FHLBs use interest rate swaps, futures, forward contracts, and interest rate caps and floors to reduce their exposure to fluctuations in interest rates. The FHLBs may also act as an intermediary with member institutions...These instruments involve, to varying degrees, elements of credit and interest rate risk...FHLBs are subject to credit risk only due to the nonperformance by counterparties to the agreements; however, based on management's credit analysis and required collateral, the FHLBs do not anticipate any losses on these agreements...Net interest income or expense on interest rate swaps, caps, and floor agreements is applied to the interest income or expense of the instrument being hedged. Gains/losses on terminated swaps are deferred and amortized using the level yield method over the remaining life of the hedge asset or liability."

The FHLB system has a composite triple A credit rating. The FHFB is working toward the goal of obtaining a triple A credit rating for each individual Federal Home Loan Bank.

Fannie Mae

The best example of the use of derivatives by a housing GSE appears to be Fannie Mae. Fannie Mae is one of the largest end-users of interest rate derivative instruments. Fannie Mae uses interest rate derivatives as a fundamental part of its business, uses foreign exchange derivatives occasionally, and does not use equity or commodity derivatives at all. According to Fannie Mae, derivatives "reduce exposure to market volatility...they create a small and manageable increase in credit risk which is overwhelmed by a reduction in exposure to market volatility."

Fannie Mae is a publicly owned GSE chartered in 1938 to purchase mortgages from lenders and resell them to investors. Fannie Mae primarily packages mortgages backed by the Federal Housing Administration (FHA), but also sells non-governmentally-backed mortgages. Fannie Mae finances the purchase of a majority of the mortgages by issuing guaranteed mortgage-backed securities (MBSs). MBSs are sold to capital market investors or swapped with lenders in exchange for conforming mortgages. Fannie Mae earns income by charging fees for guaranteeing the MBSs it issues. In its normal course of business, therefore, Fannie Mae is highly sensitive to changes in interest rates and currency rates. Fannie Mae, like other financial institutions, must also manage its duration gap, which is the difference between the estimated durations of mortgage assets and those of liabilities that fund the mortgages. Fannie Mae uses derivatives to manage its risks and duration.

One way Fannie Mae has reduced the volatility in the projected duration gap that can result when interest rates change significantly is by issuing callable debt that better matches the optional prepayment characteristics of the mortgages it funds. A related financing strategy employed by Fannie Mae has been to enter into callable swaps that effectively convert noncallable debt to callable debt.

According to Fannie Mae's 1992 annual report: "The corporation [Fannie Mae] typically uses interest rate swaps, interest rate futures contracts, short sales of Treasury securities, and deferred rate setting agreements to hedge against fluctuations in interest rate movements. The corporation enters into interest rate swaps, including callable swaps, that in general, effectively extend the maturity of short-term debt obligations. Under these swaps, the corporation generally pays a fixed rate and receives a floating rate based on a notional principal amount. Changes in the value of these hedge instruments caused by fluctuations in interest rates are expected to offset changes in the value of the items hedged ... The corporation reduces counterparty credit risk [the risk that the other party to the derivative transaction will default] by dealing only with institutions that meet certain credit guidelines and by requiring collateral in certain circumstances ... The corporation has long-term interest rate swap agreements with various parties to extend the effective maturity of certain short-term debt obligations and to adjust the effective maturity of certain long-term debt obligations.

"The corporation also has interest rate swap agreements that are linked to specific debt issues (debt swaps) or specific investments (asset swaps). These swaps achieve a specific financing or investment objective at a desired cost or yield. The costs and terms of the specific debt issues and yields of the specific investments, as presented in the financial statements, include the effects of the swaps."

Sallie Mae

Sallie Mae and the other GSEs use derivatives in many of the same ways and for many of the same reasons as does Fannie Mae.

Sallie Mae is the major financial intermediary to the U.S. education credit market. Primarily a wholesale provider of credit, its principal clients are financial institutions and other organizations that originate loans under the federally-sponsored Guaranteed Student Loan Program (GSLP). Sallie Mae's primarily financial products for such originators are purchases of insured education loans and secured funding. Sallie Mae owns about one third of the $57 billion of guaranteed education loans outstanding in 1993. To raise funds for its operations, Sallie Mae issues a variety of debt instruments in both the domestic and international capital and money markets. It has a positive record of performance and a conservatively-managed balance sheet. Its debt securities and student loan revenue bonds, backed by its letter of credit, are AAA rated.

> In financing its operations, Sallie Mae matches the interest rate sensitivity of its liabilities to the interest rate sensitivity of the assets it funds in order to avoid negative impact on earnings from changes in the interest rate environment. Since most of the corporation's assets, including most of its student loans, generally carry floating rates indexed to the 91-day U.S. Treasury bill, Sallie Mae ties the cost of related liabilities to the same Treasury bill.
>
> Sallie Mae achieves this close match either by issuing floating-rate securities priced at a spread to the Treasury bill or by issuing fixed-rate securities which are converted, in effect, to floating rate obligations tied to the T-bill through interest rate swaps or other hedging techniques, such as options and caps. Similarly, Sallie Mae funds assets that carry yields tied to LIBOR with liabilities priced at a spread to LIBOR. Fixed rate assets are funded with fixed rate liabilities of like maturities. Through the use of such financing structures, combined with the appropriate derivative products, Sallie Mae has maximized funding and basis efficiencies.
>
> Sallie Mae enters into various off-balance sheet financial instruments to reduce interest rate risk and foreign currency exposure on certain borrowings. These financial instruments include interest rate swaps (floating for fixed, fixed for floating, and floating for floating), caps, floors, currency swaps, interest rate options, currency options, and options on futures contracts.[64]

[64] Kolman, Joe, "Who's Hedging What and Why" Derivatives Strategy & Tactics.

(3) Sovereigns and Related Entities

The use of derivatives by sovereigns, except for the U.S. Government, is widespread and allows for more efficient management of their financial needs to the direct benefit of their taxpayers. Such sovereigns use derivatives for many of the same reasons as other end-users, such as to:

- hedge interest rate and currency risk arising from debt issuance;
- diversify sources of funding; and
- achieve a lower cost of funding.

Sovereigns and other related entities, such as the World Bank, primarily use interest rate and currency derivatives, although some have also begun to use commodity derivatives to manage oil price risk. The use of swaps by the World Bank dates back to the first large-scale currency swap transaction between IBM and the World Bank in 1981.

An example of a sovereign who uses swaps to manage the debt it issues in many different currencies is the sovereign of Finland. Finland is a highly rated sovereign and an active borrower in the international capital markets. The government of Finland, through the Ministry of Finance, has actively used swaps to lower its effective cost of debt and manage the currency composition of its foreign liabilities to hedge foreign exchange risks. During the period 1987-90, Finland entered into approximately 50 swaps with notional principal equivalent to U.S. $50-200 million at a time. Roughly 30% of the government's total outstanding foreign debt was swapped, with most swaps being related to newly issued debt. Swaps were used in 1990 to achieve funding costs of 30-50 basis points below LIBOR. They were also used to configure the currency composition of Finland's foreign liabilities in the direction of its official currency basket. The Finnish mark was tied to the value of the currency basket. The Ministry used currency swaps to access the lowest-cost offshore debt markets, while translating the currency composition of the debt portfolio to the desired mix. Substantial changes in the debt composition were achieved through swaps. For example, although the actual share of the Japanese yen in the external debt was 23% in 1989, currency swaps were used to reduce the effective share to 12% in 1989 and 5% in 1990.[65]

For an example of a swap involving the Export-Import Bank of Japan, see Diagram 6.

The U.S. Government does not, in practice, use derivatives. During discussions the Minority Staff had on derivatives with market participants, the question was raised of why the U.S. Government does not take advantage of derivative products to lower its funding costs and thereby reduce the budget deficit. In fact, the U.S. Treasury today may be assuming a greater risk in its current efforts to shorten maturities of U.S. borrowings than it would be in using derivative products for financial management purposes. Industry sources suggest that greater use of derivatives should be contemplated by the U.S. Government for funding purposes.[66]

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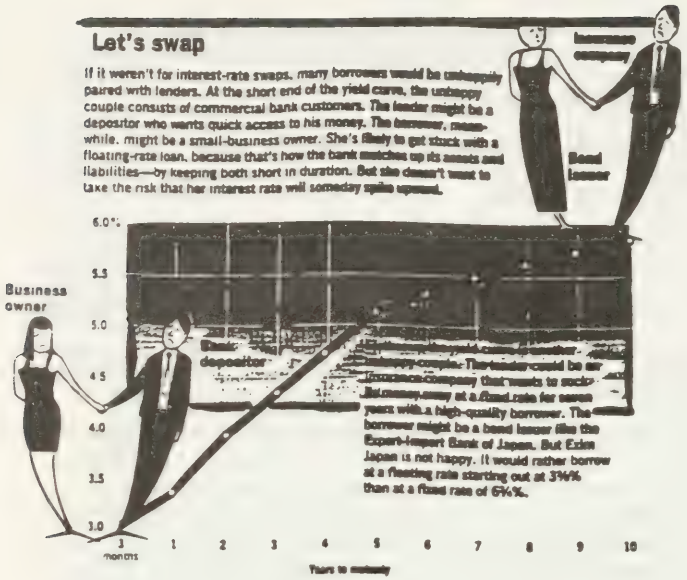
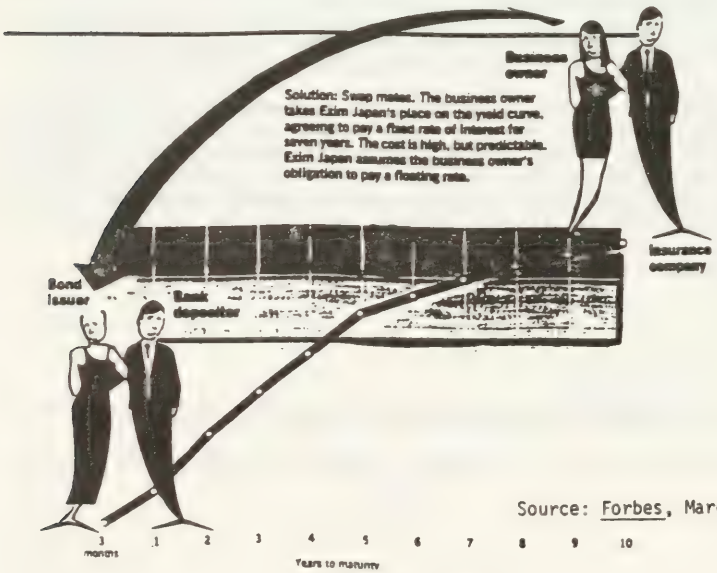
[65] Group of Thirty, Derivatives: Practices and Principles, Washington, D.C., July 1993. The Group of Thirty report, in turn, cited Beidleman, Carl, "Government Use of Cross Currency Swaps," Cross Currency Swaps, Business One Irwin, 1992.

[66] Although risks exist in the speculative use of derivatives, a strong case can be made for hedging purposes.

Diagram 6


Let's swap
If it weren't for interest-rate swaps, many borrowers would be unhappily paired with lenders. At the short end of the yield curve, the unhappy couple consists of commercial bank customers. The lender might be a depositor who wants quick access to his money. The borrower, meanwhile, might be a small-business owner. She's likely to get stuck with a floating-rate loan, because that's how the bank matches up its assets and liabilities—by keeping both short in duration. But she doesn't want to take the risk that her interest rate will someday spike upward.
Business owner
Bond issuer
Business owner
Bank depositor
6.0%
5.5
5.0
4.5
4.0
3.5
3.0
3 months
1
2
3
4
5
6
7
8
9
10
Years to maturity



Source: Forbes, March29, 1993

(4) Corporations

Corporations utilize derivatives in an end-user capacity or a dealer capacity to manage risks inherent in their businesses and reduce funding costs. This, for example, has allowed corporations to save money, and, according to industry sources, create and preserve jobs. According to industry sources, a few corporations may use derivatives to express market views (speculate), but such deliberate speculation is not common.

Corporations, like end-user financial institutions, use derivatives in an end-user capacity to, among other things:

- reduce risks (interest rate risk, currency risks, equity price risk, and commodity price risk);
- reduce funding costs;
- manage assets and liabilities;
- enhance liquidity; and
- express market views (speculate or take a position).

A corporation may achieve the above goals by either entering into a customized OTC derivative contract with a dealer, such as a dealer bank with whom it has a relationship, or it may buy and sell derivatives in the exchange-traded market.

Derivatives allow corporations to achieve these goals in a less expensive and more expedient way than by adjusting traditional assets and liabilities.

According to a report issued by the Group of Thirty on July 21, 1993 entitled Derivatives: Practices and Principles, over 83% of the private sector corporations responding to their survey on OTC derivatives as end-users consider derivatives either imperative (37%) or very important (44%) for controlling risk within their organizations. Of the corporations responding, 87% use interest rate swaps, 64% use currency swaps, 78% use forward foreign exchange contracts, 40% use interest rate options, and 31% use currency options.

Of the private sector corporations responding:

- 82% indicated they use OTC derivatives for hedging market risks arising from new financing;
- 78% use them to manage or modify the characteristics of their existing assets and liabilities;
- 33% use them to hedge translation (from foreign currency) exposures;
- 11% use them to manage energy or raw materials costs; and
- 69% use them to hedge foreign exchange transaction exposures.

Corporations use derivatives to reduce risks inherent in their business, such as managing currency risk arising from foreign exchange exposures and commodity risks arising from commodity price exposures. Corporations also use derivatives to hedge interest rate and currency risks arising from new financing, to reduce funding costs, and to diversify funding sources.

Both importers and exporters are exposed to exchange rate risk and their profits can fluctuate based upon the fluctuations in currency exchange rates. Currency-based swaps, forwards, futures, and options can all be used to create hedges of those future cash flows, to lock in exchange rates, and to reduce the risk from currency fluctuations. For example, a U.S. corporation that exports to Germany and expects payment in Deutsche marks could sell Deutsche mark futures (which requires another party to buy Deutsche marks from the corporation on a certain date at a certain exchange rate) to eliminate the threat of lower Deutsche mark spot rates at the time that the payment arrives. Corporations with overseas subsidiaries are also subject to currency risk as the values of the foreign assets and liabilities are translated into domestic currency for accounting purposes. Currency swaps can help companies match foreign currency revenues with domestic currency debt payments, by allowing them to swap cash in-flows from revenues and cash out-flows on debt into a desired currency. Derivatives, therefore, allow corporations to achieve greater certainty in costs and revenues, and removes their vulnerability to changes in currency rates.

Derivatives have been extremely useful for companies such as Harley-Davidson, which faces stiff competition from foreign companies, and airlines, which operate in a competitive global environment.

> **For example, a U.S. aircraft maker is awarded a contract to supply airplanes to a British airline for which it is to receive 50 million pounds sterling one year from today. The aircraft maker is exposed, however, to the risk that pounds sterling will depreciate relative to U.S. dollars over the next year. Therefore, the aircraft maker may enter into a currency forward where it will sell forward to another party 50 million pounds sterling in exchange for U.S. dollars at an exchange rate set today. This way, the aircraft maker will be certain of the value of the 50 pounds sterling one year from today.**

A corporation can reduce its funding costs by obtaining financing from one market and then swapping, via a currency swap, all or part of the cash flows into the desired currency and interest rates. Currency swaps also help companies to alleviate such funding problems as the lack of available credit in local foreign markets, high interest rates in available markets, foreign exchange controls and regulations in the countries involved, as well as tax and accounting problems.

Commodity swaps enable producers and institutional consumers to hedge commodity price risk. There is growing swap activity in the principal non-ferrous metals, such as copper and aluminum, and more in gold, based on the advantages of the swap instrument for protecting long-term project financing vulnerable to price instability. The major activity of commodity swaps, however, now lies on petroleum and petroleum products.

A corporation may also achieve savings by issuing structured securities (securities with embedded derivatives) tailored to meet its specific requirements.

For example, an oil company in Texas can issue a hybrid bond which pays annual interest but also ties the principal repayment to the price of oil. That is, if the price of oil rises, a larger repayment is made. Such an instrument may allow the oil company to issue the bond at a lower interest rate since the instrument represents a better credit risk because the company is asked to pay more when it is in a position to do so and less when it is not.

Corporations also use derivatives, such as interest rate and currency swaps, to manage their assets and liabilities. As economic conditions change, a corporation may wish to change the characteristics of its existing debt portfolio.

For example, Ford Motor Credit Company (FMCC) is an active user of interest rate swaps to manage its portfolio of auto loans and debt securities backed by auto loans. FMCC uses interest rate swaps to help it run a more closely "matched" book without changing the actual terms of its assets and liabilities. Interest rate swaps allow FMCC to match the maturity and interest rate characteristics (fixed vs. floating) of their auto loan assets with their auto-loan backed debt securities. Interest rate swaps, therefore, decrease FMCC's exposure to interest rate risk and allow FMCC to offer loans with the terms most desirable to customers.

Corporations also use interest rate derivatives, such as swaps and forwards, to hedge the cost of new financing, such as the issuance of fixed-rate debt or floating-rate debt. Volatile interest rates create uncertainty about the future cost of issuing fixed-rate debt. Forward swaps (a contract obligating the corporation to enter into an interest rate swap at a time in the future) can be used to lock in the general level of interest rates that exists at the time the funding is made. The corporation will then be certain of its future costs of issuing fixed rate debt. Issuing floating rate debt exposes the issuer to the risk that interest rates will rise over the life of the debt instrument. The corporation can buy a cap or a collar to limit the interest rate it will have to pay on its floating rate debt over time.

A corporation may have the ability to borrow floating rate funds but desires to borrow fixed rate funds in order to balance fixed rate assets and/or to accurately predict future costs. If the credit rating of the industrial company is not in one of the higher categories, it will not be able to raise fixed rate funds at what it considers acceptable rates. Therefore, the industrial company may seek to enter into a swap with a counterparty, such as a bank, which has a higher credit rating and can therefore borrow fixed rate funds at a lower rate. Interest rate swaps can also help an institution holding a long-term bond to protect asset value though a period of expected interest rate turbulence. The institution can enter into a swap where it makes fixed rate payments in return for receiving floating rate payments during that period, therefore alleviating the need for the institution to sell the bond outright.

McDonalds Corporation uses financial derivatives, primarily swaps, frequently to manage risks and to obtain lower costs of funding for them and their franchisees. As a global company with over 13,000 restaurants operating in 66 companies, McDonalds has financing needs which carry multiple risks in the interest rate and foreign exchange (currency) arenas. It manages these risk continuously and, as a result, has become a frequent end-user of financial derivative products.

McDonalds uses interest rate swaps to manage its debt portfolio, which as a general rule consists primarily of long-term, fixed-rate debt (fixed-rate debt is used to lock in

occupancy costs.) Using interest rate swaps, McDonalds changes the mix of fixed and floating rate debt to position the company for an expected change in interest rate levels. A fixed-for-floating rate swap entered into in 1993 saved the interest cost on a bond by an average of over 200 basis points on $100 million. Similar interest rate swaps were entered into by McDonalds in September 1992. McDonalds felt that U.K. interest rates were going to be declining so entered into four swap transactions in which it swapped 60 million of fixed-rate pound sterling liabilities into floating rate liabilities. The fixed rates McDonalds is now receiving average more than 2% above the floating rates it is paying. Therefore, the swap is currently worth about $9 million dollars to McDonalds since interest rates have declined.

McDonalds uses currency swaps to create foreign currency liabilities and cash outflows which match assets and cash inflows in those currencies. Currencies received in swap transactions of McDonalds are often lent to foreign subsidiaries as a source of financing to them. The swap market is often the only source of long-term fixed-rate foreign currency for certain of their international markets, whose borrowing needs are too small to be funded through the capital markets. Foreign bank lines are typically available, but are generally more expensive than borrowing in the capital markets, and entering into a swap, by 150 basis points. During 1992 and the first 6 months of 1993, McDonalds saved approximately $1.9 to $3.8 million in interest payments by using swaps.

McDonalds periodically buys and sells foreign exchange and other options. In 1992, McDonalds used equity put options which lowered the cost of their common stock repurchase program. They sold a put option to another party which allowed the party to sell its shares to McDonalds for $47/share. McDonalds received a premium for selling the put option. McDonalds stock subsequently rose to a price over $47/share, and the party did not exercise the option. The cost to McDonalds of the entire stock repurchase program was reduced by the amount of premium it received from the option.

In a speech regarding its derivative activities,[67] the Treasurer of McDonalds stated that he thinks "banks can capitalize on a vast opportunity by delivering more of these flexible [derivative] instruments to small and medium size businesses so that entrepreneurs can reduce their financial costs and risks. Caps on floating rate loans and attractive fixed rates would be the primary vehicles."

(5) Insurance Companies

Insurance companies act as both end-users and dealers.[68] Insurance companies use swaps and other derivatives to manage the interest rate exposure and embedded options associated with specific insurance products, such as single premium deferred annuities, Universal Life, and Guaranteed Investment Contracts (GICs). Insurance companies regulated primarily at the state level. The National Association of Insurance Commissioners (NAIC) has drafted a model insurance regulation which includes the issue of derivatives. Under the model regulation, insurers' participation in derivatives would be limited to hedging, limited income generation, and the sale of covered call options.[69]

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[67] International Swaps and Derivatives Association, Summer Conference, July 28, 1993.

[68] Two insurance companies act as dealers, namely AIG and General Re.

[69] See, the National Association of Insurance Commissioners, "NAIC Draft Investments of Insurers Model Act," Sections 23 and 41: Derivative Transactions, NAIC, Washington, D.C., September 1993.

(6) Farmers

Farmers have used derivative products for years to lock in prices for their crops or to establish a minimum price they will receive for their crops at a future date.

Farmers use futures on commodities in order to lock in a specific price on a crop they are planning to sell in the future.[70]

> For example, if a wheat farmer is planning to sell his wheat into the market in nine months, he may wish to sell a future in order to lock in a price that he will receive for his wheat in nine months. For example, a wheat farmer may sell a future which obligates another party to buy 40,000 bushels of wheat at $3/bushel ($120,000). If the market price of wheat is only $2/bushel in nine months, the farmer benefits by instead receiving $3/bushel ($120,000) due to the future. (Or the other party can choose not to take physical delivery of the wheat and instead settle the trade in cash by paying the farmer $1/bushel ($40,000), and the farmer could subsequently sell his wheat in the market for $2/bushel ($80,000), for a total receipt to the farmer of $120,000.) If the market price of wheat is $4/bushel in nine months, the farmer does not benefit, as he only receives $3/bushel ($120,000) due to the future when he could have received $4/bushel ($160,000) if he had not entered into the future. (Or the other party can choose not take physical delivery of the wheat and the farmer can instead settle the trade in cash by paying to the other party an amount equal to $1/bushel ($40,000), and subsequently sell his wheat in the market for $4/bushel ($160,000), for a total receipt to the farmer of $120,000.) The receipt of $120,000 is, in both cases, increased by the amount of money the farmer received from the sale of the future.

Farmers use options on commodities in order to establish a minimum price they will receive for their crops they are planning to sell in the future.[71]

> For example, if a wheat farmer is planning to sell his wheat into the market in nine months, he may wish to hedge against a drop in wheat prices by buying a put option in order to guarantee that he will receive <u>at least</u> a certain price for his wheat in nine months. Unlike in a futures contract, the farmer will still be able to enjoy a rise in wheat prices. For example, a wheat farmer may buy a put option which allows him to sell, and obligates the other party to buy, 40,000 bushels of wheat at $3/bushel if the farmer exercises his option. The farmer will only exercise his option if the price of wheat is below $3/bushel in nine months. If the market price of wheat is only $2/bushel in nine months, the farmer will exercise his option and sell wheat to the other party for $3/bushel ($120,000), instead of $2/bushel ($80,000). (Or the other party can choose not take physical delivery of the wheat and instead settle the trade in cash by paying the farmer $1/bushel ($40,000), and the farmer would subsequently sell his wheat in the market for $2/bushel ($80,000) for a total receipt to the farmer of $120,000.) If the market price of wheat is $4/bushel in nine months, the farmer will <u>not</u> exercise his option and will instead sell his wheat in the marketplace for $4/bushel ($160,000). The receipt of $160,000 is decreased by the amount of money the farmer had to pay for the put option.

Farmers, such as those involved in sophisticated agri-businesses, at times could use derivatives to speculate, as there appears to be a fine line between hedging and

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[70] A commodity future is an agreement to buy or sell a specific amount of a commodity at a particular price on a specified future date.

[71] A commodity option is an agreement which gives the buyer of the option the right, but not the obligation, to buy or sell a specific amount of commodity at a specific price. The seller of the option is obligated to buy or sell the commodity.

speculating in such commodity markets.

(7) Municipalities

Municipalities use derivatives for many of the same reasons as other end-users, such as to:

- hedge interest rate and currency risk arising from debt issuance;
- diversify sources of funding; and
- achieve a lower cost of funding.

Municipalities primarily use interest rate and currency derivatives, although some have also begun to use commodity derivatives to manage oil price risk.

> For example, municipalities including Atlanta, Boston, San Francisco, Washington, DC and Delaware began using derivatives in 1991 to lock in or cap fuel costs as a way of controlling their energy costs.
>
> In particular, the Metropolitan Atlanta Rapid Transit Authority (MARTA) entered into a one-year commodity swap in May 1991 to lock in a fuel price for its budget. The swap contract guaranteed MARTA a price of 53.3 cents per gallon for No. 2 heating oil on nine million gallons of oil purchased during the 1991-92 fiscal year. The transaction is estimated to have saved MARTA more than $1.5 million over actual market prices.[72]

Another example involves the use of derivatives by the Illinois Educational Facilities Authority on behalf of Loyola University of Chicago.[73]

> In June 1993, the Illinois Educational Facilities Authority (the Authority)[74] issued $75 million of tax-exempt debt on behalf of Loyola University of Chicago. The proceeds from the bond issue, underwritten by Morgan Stanley, were used to lower interest costs of the University through an advance refunding of previously issued tax-exempt bonds. This transaction was notable for its use of derivative products, specifically $44 million of Auction Rate Notes (ARNs)/Yield Curve Notes (YCNs) as well as two maturities of Structured Yield Curve Notes (SYCNs) that totaled $14 million. These derivative products enabled the University to achieve interest savings of 10 to 20 basis points in comparison to a more traditional current coupon bond. This translated into approximately $1 million in present value savings for the University ($87,000 in annual savings over the life of the bond issue). The following outlines the derivative products used in the transaction.
>
> ARNs/YCNs are derivative securities developed to meet investor demand for a tax-exempt security that produces additional income when short-term interest rates are low. The result of the derivative structure is that the borrower pays a fixed rate on the total amount of ARNs and YCNs that is lower than the rate it would pay with a conventional fixed rate

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[72] Group of Thirty Report, Derivatives: Practices and Principles, Washington, D.C., July 1993.

[73] Source: Morgan Stanley & Co. Incorporated.

[74] The Authority was created by the State of Illinois to help private and not-for-profit higher education institutions in Illinois finance the construction of education facilities.

bond issued.[75]

SYCNs[76] are similar to ARNs/YCNs in that the borrower pays a net fixed rate that is lower than the interest rate it could achieve with a conventional fixed rate issue. With SYCNs, the issuer pays a below-market long-term fixed rate for the life of the issue. To achieve the below-market rate, the issuer enters into an interest rate swap agreement for a portion of the long-term debt obligation, 4 years and 5 years in the case of the Illinois Educational Facilities Authority. During this initial 'structured' period, the borrower makes payments to investors according to a Structured Coupon formula.[77] Under the swap agreement, the borrower receives payments exactly equal to the Structured Coupon obligation from its swap dealer. In return, the issuer pays its swap counterparty the below-market long-term fixed interest rate. Upon expiration of the swap, the investor receives the fixed-rate (previously received by the swap dealer) in place of the Structured Coupon. For tax reasons, the issuer must make interest rate payments to the investor throughout the life of the bond issue.

Two varieties of SYCNs were structured by Morgan Stanley for the Authority's issue: $4 million 'Embedded Caps' and $10 million 'Leveraged Embedded Caps.' These SYCN products provided a slightly below-market current return with the possibility of dramatically increased current returns for investors if short-term rates exceed the strike price on the embedded caps during the initial structured period. The return generated by the leveraged embedded cap increases at a multiple of the increase in short-term rates above the strike price of the cap. As a result of the potential higher returns offered by these products, investors were willing to accept lower current yields.[78]

(8) **Institutional Investors/Investment Companies including Mutual Funds**

Institutional investors and investment companies use derivatives to:

- hedge declines in portfolio values by managing interest rate, currency, and other risks. (According to the Investment Company Institute, hedging is the most common usage);
- enhance yields;
- diversify exposure to individual debt and equities; and
- express investment viewpoints not easily made in conventional instruments.

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[75] With ARNs/YCNs, a traditional fixed rate bond is issued in two pieces. ARNs are a floating rate security, whose return increases as short term rates rise. YCNs are an inverse floating rate security whose return increases as short term rates fall. Because ARNs/YCNs are marketed toward investors who have specific views regarding the direction of short-term interest rates, they provide a more efficient financing option for issuers as well as an attractive investment vehicle for money managers.

[76] Introduced in 1991 by Morgan Stanley & Co. Incorporated.

[77] The Structured Coupon is designed to appeal to an investor with a specific view on the direction of interest rates.

[78] Another essential factor in achieving savings with SYCNs is the interest rate swap. This hedge, however, exposes the issuer to the possibility that the swap dealer could default on its Structured Coupon obligation. Because of this credit risk, swap agreements for SYCNs are often limited to short periods and are only entered into with well capitalized and highly rated swap dealers. It should also be noted that the notional, or principal, of the interest rate swap is not at risk. The credit exposure arising from an interest rate swap is equal to the additional cost the issuer might incur if it must replace the swap counterparty in a market environment where the issuer must pay a higher fixed rate to receive the Structured Coupon Rate.

"Investment companies" are those who are specially registered with the SEC to invest the pooled funds of small investors in securities appropriate for its stated purpose. A mutual fund is a type of investment company which has a floating number of outstanding shares and stands prepared to sell or redeem the shares at their net asset value. Investment companies are covered under the Investment Company Act of 1940. "Institutional investors" is a term used for a broad category of investors, including investment companies and investors not regulated by the SEC, such as insurance company funds, retirement funds, and hedge funds.

All investment companies must mark their derivative positions to market daily, regardless of whether the derivative is used for hedging or speculating.

Most large mutual funds have changed their prospectuses to allow use of currency contracts and other derivatives. Mutual funds use derivatives along with traditional financial instruments to better eliminate the risks they do not want while incurring the risks they do want. For example, opportunities for traditional stock funds are no longer restricted by national boundaries now that mutual funds can hedge currency risks.

An example of a mutual fund which uses derivatives is the $8 billion Janus Fund.[79] In 1992, the Janus Fund was able to protect its largest investment, 90,000 shares of the Swiss Drug manufacturer Roche Holding AG from a drop in the Swiss franc. The fund entered into a derivative contract which locked in an exchange rate. The exchange rate of the Swiss franc subsequently fell 18.2%, the Janus fund saved about $26 million by entering into the derivative contract.

Pension funds have also encouraged their "stock pickers" to use derivatives to curb their currency and other market risks.

For example, pension funds at such organizations as Shell Oil, Dayton Hudson, General Motors, Los Angeles County, IBM, and Monsanto use derivatives.

Derivatives such as swaps offer investors new opportunities to actively manage portfolios. As with futures and options, swaps provide a means of limiting an investor's exposure to an increase/decrease in rates and changing relative values among different sectors.

For example, swaps can be used to rebalance portfolios without trading bonds. Take a fixed income investor who is restricted from liquidating assets to effect a redeployment to a more attractive sector of the yield curve. The investor is limited to investing in short-term instruments (in which it receives LIBOR + 25 basis points) and believes it would be opportunistic to lengthen duration to take advantage of relative value opportunities. Therefore, the investor would enter into a swap in which it pays LIBOR and receives 5-year U.S. Treasury = 38 basis points. The result is that the investor continues to hold short-term instruments but has rebalance his position to synthetically hold higher-yielding intermediates (5-year U.S. Treasury = 38 basis points.)

Interest rate swaps can also help an institutional investor holding a long-term bond to protect asset value though a period of expected interest rate turbulence. The investor can enter into a swap where it makes fixed rate payments in return for receiving

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[79] For more information, see Granito, Barbara Donnelly, and Torres, Craig, "Many Americans Run Hidden Financial Risk From 'Derivatives'," Wall Street Journal, August 10, 1993.

floating rate payments during that period, therefore alleviating the need for the investor to sell the bond outright.

Institutional investors use financial futures (obligation to buy or sell a particular basket of instruments at a specific price in the future) as an asset allocation tool. Futures allow investors to shift the fixed-income, currency, and equity portions of their portfolios without having to incur the costs of transacting in the cash markets. Pension and other types of benefits managers may hedge a fixed future liability by selling futures or hedge an expected receipt by buying futures.

Institutional investors use swaps to benefit from an investment in or exposure to foreign debt or equity markets without incurring foreign exchange risk. A Japanese investor, for example, may wish to earn a return on the U.S. S&P 500 Stock Index but wish to be paid in yen. Therefore, the investor may enter into a swap which allows him to be paid in yen at a predetermined exchange rate. (The investor may swap the payments it receives on the S&P in U.S.$ for payments in Japanese yen at a specific exchange rate.)

Institutional investors may enhance the yield on their portfolio by purchasing a security and neutralizing an undesirable feature of the security with a suitable derivative transaction. Investors may further enhance their yields and reduce their risks by investing in customized "structured securities" which are the equivalent to combinations of derivatives and traditional credit extension instruments, such as bonds. By entering into such a contract, an investor can create a new security with enhanced, and more desirable, performance features. For example, an institutional investor may like the high credit rating associated with a particular security, but not the fixed coupon rate. In this case, the investor would enter into a swap with a bank whereby the bank commits to pay a fixed rate on a notional amount (which will equal the principal amount of the securities purchased by the investor) and the investor commits to pay a floating rate (based on the coupon payment of the securities). Thus a synthetic security is created through the use of a swap. Synthetic securities, in practice, are most commonly used to create a floating-rate asset from a fixed-rate asset.

Structured securities exhibit risk/return characteristics similar to plain derivatives. Most are sold to sophisticated investors capable of analyzing their risk/return, leverage, and liquidity characteristics. Institutional investors typically operate within a set of investment guidelines, with regulatory supervision for some institutional investors.

Investors can also limit their exposure to specific debt and equity instruments by using derivatives. Equity index futures (the right to buy or sell a specific amount of equity instruments at a specific price tied to an index) can be used to adjust a portfolio's exposure to the stock market. An equity swap which involves the exchange of a fixed income return for an equity return allows an investor to earn equity returns when the investor deems them promising, but to earn equity returns without the transaction costs of liquidating an existing bond position or building an outright equity position. The investor also avoids the complications of transacting in unfamiliar local markets and choosing individual stocks when a stock index will suffice. Equity swaps, as with all swaps, may be enhanced by options features customized to the interests of the investor. A counterparty on the other side of the equity swap may wish to change the equity base on which it earns returns or change its base to a non-equity base, such as a stable and

predictable bond, for a specified period of time to achieve particular business objectives.

An equity swap may also involve the exchange of one equity return for another equity return, thus allowing an institutional investor to exchange one market risk for another market risk. (For example, an investor may pay a swap dealer or other counterparty a fixed sum based on the S&P index, and the dealer or other counterparty may pay the investor a fixed sum based on the DAX index (a German securities index).)

Regulation and Suitability of Institutional Investors:[80] Some have expressed concern as to the suitability of mutual and other investment funds to invest in structured securities and otherwise use derivatives. Typically, funds use derivatives to hedge risks. For institutional investors covered under the Investment Company Act, namely investment companies, there exist restrictions on activities and disclosure requirements. Section 18 of the Investment Company Act restricts investment companies' ability to issue senior securities (debt or preferred stock). Investment in certain types of securities, such as an investment created by selling a call (a type of derivative), may create what is considered a senior security obligation and would therefore be prohibited if the call position were uncovered. By selling (writing) an uncovered call in stocks, for example, the investment company would be obligated to deliver stocks it does not yet own to another party at a future date, therefore creating an obligation for the investment company. If the obligation were covered by the underlying asset or other eligible asset placed in a segregated account, however, it would not be prohibited. The requirement that such positions be covered limits derivative activities of investment companies. Money market funds are particularly limited in their activities and generally would not be involved in derivatives.

If an investment company is to be allowed to pass income to investors on which it does not pay taxes, a Section of the IRS code limits investment companies from having more than 30% of its gross income generated from options, forwards, and futures held for less than 3 months. This could also limit certain derivative activities of an investment company.[81]

The SEC, under the Investment Company Act, also requires investment companies to disclose the types of securities in which it invests, the instruments it uses, and the risks associated with such activities. Therefore, the use of derivatives should be discussed where appropriate in such disclosures. Any material use of derivatives by an investment company should be disclosed under the current disclosure requirements. Investment advisors who do not properly disclose such activities are liable under the anti-fraud provisions of the securities laws for material non-disclosure. Investment advisors who are covered under the Investment Company Act are also subject to National Association of Securities Dealers (NASD) regulations regarding, among other things, suitability and know-your-customer rules.

There appears to be no direct danger posed to banks by the derivative activities of their mutual fund affiliates, as restrictions on transactions between affiliates are set

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[80] The issue of suitability will be discussed in Section C: Suitability. See also Question #15 posed to the regulators by Representative Leach.

[81] IRS Code §851(b)(3).

forth in Section 17 of the Investment Company Act and in Sections 23A and 23B of the Federal Reserve Act.

(9) Speculators[82]

The term "speculator" is generally used to refer to a participant in a market who is willing to take a view on the direction the market is heading, by establishing an open position to profit from market movements in a particular direction, rather than seeking to offset an exposure in another market. Speculators hope to profit by accepting the risk that stems from taking outright, unmatched positions in anticipation of price or rate movements. These are the risks which offer the opportunity for the largest gains as well as the possibility of commensurate losses.

For example, traders and investors can use currency products, such as futures and options, to bet on currency rates. Speculators may use futures, including interest rate futures, equity futures, and commodity futures, to make bets on changes in future prices in those markets by having uncovered long or short positions, combinations of long and short positions, combinations of various maturities, or cash and futures positions. Speculators may profit from uneven shifts in the yield curve, fluctuations in exchange rates, or changes in interest rate differentials.

Institutions who speculate in options, primarily exchange-traded options, seek to profit from changes in the price of the underlying asset.[83] If an institution believes that the price of the underlying asset will increase, it will buy a call option. As the price of the underlying asset increases over the strike price, the institution will profit if it exercises the option. Conversely, the institution can take advantage of an expected price decline in an underlying asset by buying a put option. Accordingly, as the market price of the underlying asset decreases below the strike price, the institution can "put it back" to the seller at a price higher than the market price by exercising the option.

There is a general consensus among most market participants and regulators that the existence of individuals, groups or companies who take large, unmatched positions is a fundamental part of all capital markets activities, providing liquidity, balance and reliable pricing to the marketplace and to those who wish to use the derivative markets for risk management purposes. According to a report issued by the Federal Reserve Bank of Kansas City,[84] "because speculators deliberately assume additional market risk, some observers have expressed concerns that the actions of speculators might increase volatility in financial markets or might raise the level of credit risk in the market. In some circumstances, though, speculators may reduce volatility by providing an increased supply of counterparties and thus increasing the liquidity of certain contracts. And to help control credit risk, derivative exchanges frequently require speculators to post higher margins that other investors."

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[82] See also Question #23 posed to the regulators by Representative Leach and Question #3 posed to the SEC and the CFTC by Representative Leach.

[83] According to industry practitioners, OTC options are rarely used for speculation as they are customized products and instruments better suited for speculation exist.

[84] Heinecke, Kenneth, "Are Derivatives Too Risky for Banks?" Economic Review, Federal Reserve Bank of Kansas City, Third Quarter, 1993.

According to certain market participants and regulators, speculators absorb risks that other market participants, including depository institutions, desire to transfer. The sheer size and activity of the derivative markets for the most popular and widely used derivative instruments make it unlikely that an individual or institution, or even a group of speculators in collusion, would be able to manipulate the market for personal gain. Even in the short term, any attempt by any market participant or participants to move prices of exchange-traded instruments would be immediately identified as a market inefficiency. Market manipulation in the futures and options market is activity which is strictly prohibited by law. In response to the possibility of market manipulation, the CFTC and the futures exchanges have developed an extensive regulatory framework to guard against such an event.

The CFTC regulates speculators by, among other things, imposing margin requirements and trading limits. Speculators, as all others, must post margin on all futures transactions and on the sell side of an options transaction. Certain trading limits are set for traders, including federal limits on derivative products based on wheat, corn, soy bean products, cotton, and oats. Trading limits on other products are set by individual exchanges, upon requirement from the CFTC. Certain exceptions have been made for hedgers. Certain exchanges have been allowed to substitute absolute limits with what is referred to as "position accountability" in which the exchange may contact the trader to insure that the trader is qualified to take such a position.

Speculation can take place in certain financial institutions, investment banks, corporations, and firms who specialize in investing and speculation. For example, much attention by House Banking Committee Chairman Henry Gonzalez has been given to a an investor named George Soros. Mr. Soros controls a number of financial companies, including the Quantum Fund, that, among other things, invests and trades in foreign exchange, stocks, and bonds. The mere size of activity and profits of the Soros funds has drawn attention to Mr. Soros and has raised questions as to whether or not Mr. Soros is able to "move markets".[85] In particular, Chairman Gonzalez stated that he would ask the FED and the SEC "to review Mr. Soros' impact on the foreign exchange market to determine if it is possible for an individual actor to manipulate it." There is interest in the activities of Mr. Soros by Banking Committee Members on both sides of the aisle.[86]

In September 1993, the GAO issued a report entitled International Finance: Recent Developments in Foreign Exchange Markets.[87] The GAO conducted the study at the request of Ranking Member Leach who stated:[88] "In my request to the GAO, I expressed concern over the efficacy of governmental intervention in the foreign exchange markets, especially since it is public funds at risk when central bankers and treasuries buy and sell currencies. In addition, it was uncertain to me the role speculators played in precipitating the European Currency Crisis and whether the currency markets were

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[85] See also Weiss, Gary; Schares, Gail; Smith, Geri; Dwyer, Paula; Sandler, Neal; and Pannar, Karen, "The Man Who Moves Markets" Business Week, August 23, 1993.

[86] The Members of the Committee are optimistic that Mr. Soros will testify before it in the near future.

[87] GAO/GGD-93-154 was written at the request of Representative Jim Leach, Ranking Minority Member of the Committee on Banking, Finance and Urban Affairs.

[88] See the October 14, 1993 Congressional Record.

becoming less stable and thus posed a threat to the international financial system. As evidenced in last year's European Exchange Rate Mechanism (ERM) crisis, when foreign governments, a la the British, put pride above market forces, private sector money managers, a la George Soros, not unnaturally take advantage of circumstance, and raid the Exchequer."

In general, the report concludes that market forces rule the currency markets today, and that governments should be cautious to bet their treasuries on fixing the exchange rates of their currencies at an unrealistic value. Furthermore, while certain risks exist, the currency market is not a "house of cards."

With regard to speculation, the report notes that while speculators take more risks and leverage their capital more highly than other traders, it is difficult to distinguish speculative trades from others. Furthermore, instead of making the currency markets more risky, the GAO found both market participants and academics who believe that speculation may actually dampen market volatility and encourage market liquidity.

However, as Representative Leach stated:[89] "Human nature being what it is, the prospect of destabilizing speculation in the foreign currency markets should not be ruled out. Financial markets and the risks involved change rapidly...While currency trading has become a new, and badly needed, source of profits for large international banks, it could become more problematic if new, less-sophisticated entrants attempt to play leveraged games with other peoples' money. It is therefore crucial, at a minimum, that bank regulators assure that the 1980's S&L circumstance, where profit was privatized and loss socialized, not be allowed to repeat itself in federally insured financial institutions."

[89] Ibid.

5. GROWTH IN THE FINANCIAL DERIVATIVE MARKETS

Growth in the financial derivative markets has been phenomenal since their use became widespread over roughly the last decade.[90] Both organized exchanges and over-the-counter (OTC) markets have prospered in size of participants and volume of contracts. Interest rate contracts, notably futures in exchange markets and swaps in OTC markets, have dominated the growth of derivatives in the last six years. During the same period, growth in exchange-traded currency futures and options slowed, while growth in new equity index options surged in both exchange and OTC markets.[91] Researchers have confirmed that the most successful exchange-traded derivatives appear to be those that added liquidity to the underlying markets, while the most successful OTC derivatives were those that offered new configurations of risk and return.

Financial derivative markets have grown similar to other financial innovations as they found increasing acceptance among users. Growth in financial derivatives begins slowly, then surges as contracts became more popular, and finally slows down as the contracts mature and saturate their markets.[92] Growth rate for a derivative contract will thus depend on factors such as the date of introduction and the stage it has reached in its life cycle. However, various demand and supply factors[93] more or less compress and stretch the life cycle of a new derivative product and consequently, growth rates are not predictable.

a. Forces Driving Derivative Growth

It is generally agreed that the growth in exchange-traded derivatives arose primarily from the demand for liquidity-enhancing innovations and the growth in OTC derivatives from the demand for market-risk-transferring innovations. According to the Remolona Study, and verified by financial derivative participants, four broad developments gave rise to the growth in financial derivatives, as follows:

(1) Shifts and Surges in Market Volatility

The volatilities of underlying markets in the last six years have not shown a sufficiently steep rising trend to explain the recent growth of financial derivatives. However, the timing of volatility-induced shifts in policy regimes helps explain why currency contracts reached the slow-growth stage so much earlier than interest rate contracts. Market volatility, as measured by the standard deviation of Treasury bond returns, rose from an average of 8% per year in the 1970s to 15% in the 1980s. Thus,

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[90] For a more detailed presentation on growth in the derivative markets, refer to Remolona, Eli M., "The Recent Growth of Financial Derivative Markets," FRBNY Quarterly Review, Winter 1992-3 ("The Remolena Study").

[91] Ibid.

[92] Growth patterns typically follow the "S-shape" of a logistic growth curve, where growth is initially slow (introduction), then surges (acceptance and use), and finally levels off (saturation). See Chart 12 for an illustration.

[93] For example, the increased need to hedge against risks and advances in communication and information-processing technologies.

currency contracts gained popularity first and now appear to have reached the slow-growth stage of maturity, while interest rate contracts are still gaining popularity and continuing to grow strongly in trading volumes.

Temporary surges in volatility often induce temporary surges in volume. It is also possible that a temporary volatility surge can increase demand permanently by bringing new converts to the market. In one case, an extreme surge in volatility seems to have actually reduced volume permanently. Specifically, the October 1987 stock market break was followed by a sharp decline in the volume of equity index contracts in U.S. exchanges. The demand for such transactions was driven in large part by portfolio insurance programs that relied on index futures and options for dynamic hedging. When the stock market crashed, the abrupt loss of liquidity in the cash and derivative markets made the large trades required by the programs hard if not impossible to execute. Since then, concerns about execution risk have dampened trading in index contracts on U.S. exchanges.

(2) The Demand for Liquidity

Liquidity is the ability to alter exposure to market movements cheaply and quickly. This ability would depend on transactions costs, including commissions and bid-ask spreads, and the market's capacity to absorb large trades with small price movements. Derivative exchanges use technology, clearinghouse and margin arrangements, and dealer competition to minimize transactions costs. The market's capacity to absorb large trades depends on the market-making capability of dealers, and the depth of both the cash and derivative markets. In general, exchange-traded derivatives allow only a less than perfect replication of positions in the underlying market, but they are useful precisely because their liquidity makes it easier to change those positions. The growth of OTC derivatives has also helped boost volume in certain exchange-traded derivatives. The liquidity of exchange-traded derivatives generally makes them convenient hedging tools for OTC derivative dealers.

(3) The Demand for New Ways to Transfer Interest Rate Risk

OTC derivatives have served primarily to transform market risk, or to provide new ways of transferring that risk.[94] Interest rate swaps, for example, were innovative because they functionally allowed the exchange of two notes paying different types of interest streams -- most commonly a floating-rate note and a fixed-rate note -- without an exchange of principal amounts. The swap was designed essentially to allow a transfer of interest rate risk that entailed no credit risks associated with the principal.

The rapid growth in OTC interest rate contracts, particularly swap contracts, may be attributed to financial institutions' and nonfinancial corporations' desire to deal with interest rate risks in new ways. Financial institutions turned to these derivatives to replace traditional hedging operations executed in the cash market (e.g., stock and bond markets), while nonfinancial corporations, some facing increased leverage, turned to

[94] In the terminology of finance theory, the function of derivatives is to help "complete" financial markets.

derivatives for general hedging and positioning purposes rather than just for saving on borrowing costs.

(a) Development of the Swap Market: A movement towards greater market integration promoted the rapid rise of interest rate swaps. Throughout most of the 1980s, the swap market seems to have divided itself between a short-term segment (maturities up to three years) catering largely to financial institution end-users, and a long-term segment (maturities longer than three years) catering to mainly nonfinancial end-users. In recent years, however, the division has blurred as nonfinancial end-users have increased their share of the market (**See Table 2**) by migrating to the short-term segment, which has thus grown faster than the long-term segment (**See Chart 3**).

Swap intermediation evolved from a business of simply bringing end-users together to one in which dealers acted as the counterparty to each side of a swap transaction. Assuming the role of counterparty allowed dealers to take swaps before matching positions could be found and to sell parts of the transaction to other dealers who could reach matching customers. As the market grew, the customers themselves began to see the importance of a dealer's credit rating, so that the business became increasingly concentrated in the highest rated intermediaries.[75]

(b) Credit Market Arbitrage: Some analysts have argued that borrowers turn to swaps to obtain the cost savings from arbitrage between credit markets. Fixed rate debt markets are seen as demanding higher credit risk premiums relative to the floating rate debt markets. Thus, interest rate swaps would lower borrowing costs through 'specialization by comparative advantage' a higher rated borrower would issue in the fixed rate market and a lower rated borrower in the floating rate market, each seeking the market where it was relatively favored. They would then switch interest payments, net of a spread.

Such credit market arbitrage, however, fails to explain a surge in swaps issuance that goes well beyond the gross issuance of all Eurobonds and U.S. corporate bonds. The swap market has developed to the point where good opportunities for credit market arbitrage come only in occasional windows, so that swaps are now more often used for general hedging and positioning purposes than for savings in borrowing costs. Indeed, the perceived savings in borrowing costs through swaps may now merely compensate for the added credit risk taken on by the swap counterparties.[76]

(c) Swaps by Financial Institutions: End-user swap activity grew as financial institutions started using swaps for their own risk management and positioning purposes. The increased importance of funds management from the mid-1980s onward and new regulatory capital standards later in the decade prompted many banks to turn to swaps as a way to deal with increased interest rate risks.

New regulatory capital standards also encouraged financial institutions to use

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[75] The importance of credit ratings has led some investment houses to form triple-A-rated subsidiaries to deal in OTC derivatives. See discussion of dealers in Section A.4.a.(5): Separately Capitalized Subsidiaries.

[76] A fixed rate borrower, for example, has two alternatives: (a) it may borrow directly in the fixed rate market, or (b) it may borrow in the floating rate market and swap into fixed rates. Alternative (b) may offer the lower all in cost of funds, but unlike (a), it will also entail some credit risk from the swap counterparty.

Table 2

End-Users of Interest Rate Swaps
(Percent Share of Total Notional Principal)

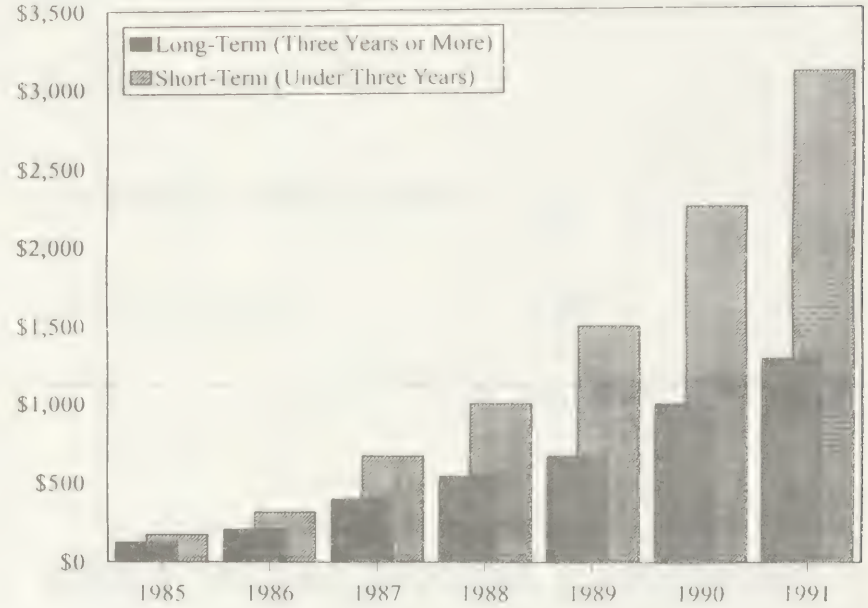
	1989	1991
Corporations	24	31
Financial Institutions	62	57
Government	7	11
Other	7	1

Source: International Swap Dealers Assoc.

Chart 3

Interest Rate Swaps by Maturity

Billions of Dollars of Notional Principal



Source: International Swap Dealers Assoc

Note: Values for 1985 and 1986 are estimates based on reports by fifteen dealers

derivatives rather than cash markets for the management of interest rate risks. The Basle Accord of 1989 required banks to assign a 20% weight to interbank credit for calculating risk-based capital requirements but to apply the same weight only to "credit-equivalent" amounts of OTC derivatives. Hence, an interbank swap would require only a small fraction of the capital required by an equivalent interbank cash position on the balance sheet. In the early 1980s, the most important cash market used by banks for hedging was the international interbank credit market. In recent years, the interbank market has plunged, in part because banks now use the market narrowly for funding and use OTC derivatives for hedging.

(d) Swaps by Nonfinancial Corporations: The use of interest rate swaps by nonfinancial corporations expanded as credit market arbitrage ceased to be the primary motivation and as corporations began to appreciate derivatives' general usefulness for hedging and speculating. An important factor in the growth of swaps was the rise in U.S. corporate leverage. While the most leveraged corporations probably did not use swaps -- for lack of the credit quality required by the market -- more moderately leveraged firms evidently found swaps useful. A study of 356 publicly traded firms,[97] for example, shows that swap end-users were on average more leveraged than the nonusers. Most of the swap end-users in the sample were apparently hedging against interest rate risk by swapping into fixed rates.

(4) The Global Diversification of Equity Portfolios

In the 1980s, moves by institutional investors to diversify their equity portfolios contributed to the growth of the use of financial derivatives. Modern portfolio theory had persuaded these investors that diversification could reduce risk without sacrificing return.[98] Institutional investors saw that in the absence of transfer risks, settlement risks, and substantial transaction costs, a global diversification of equity portfolios could provide considerable gains over purely domestic diversification, especially when correlations between stock markets remained low.

b. Growth by Type of Market

Financial derivatives outstanding worldwide, as measured by open interest[99] (for exchange derivatives) and notional principle[100] (for OTC derivatives), multiplied fivefold in five years to approach $10 trillion by the end of 1991 (See Chart 4).[101] In organized

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[97] Anuradha Dayal, "Firm Participation in the Interest Rate Swap Market: An Empirical Investigation," unpublished paper, Brown University, November 1992.

[98] The Capital Asset Pricing Model (CAPM) suggests that in an efficient market, investors would hold the market portfolio consisting of all securities offered in the market.

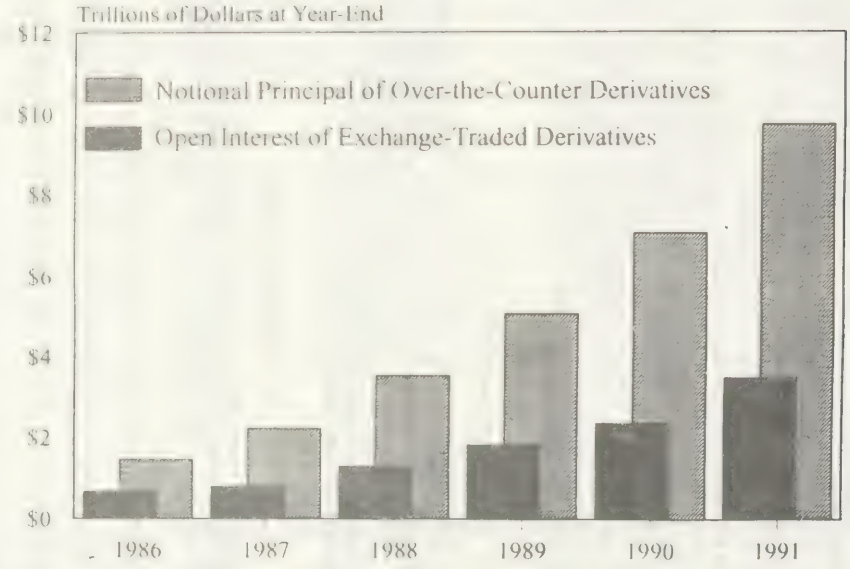
[99] Open interest represents contracts that have not been offset by opposite transactions, or fulfilled by delivery of the underlying financial instrument.

[100] Payments are calculated using notional amounts; notional principle is not exchanged or owed.

[101] Sources for all charts and data include the Remolona article, the Bank for International Settlements, the International Swap Dealers Association, and the Federal Reserve.

Chart 4

Exchange-Traded and Over-the-Counter Derivatives



Sources: For exchange-traded derivatives, Bank for International Settlements (BIS), for over-the-counter derivatives, International Swap Dealers Assoc., Federal Reserve Bank of N.Y. staff estimates, and BIS estimates.

exchanges, open interest in financial derivatives rose an average of 36% a year since 1986 to reach $3.5 trillion at the end of 1991. Even so significant an expansion was apparently surpassed by the growth of financial derivatives in OTC markets; here, total notional principal grew an estimated 40% a year during the period 1986-1991 to soar above $6 trillion by the end of 1991.[102] It is clear from the growth numbers that derivatives are widely regarded as a more cost-effective means to manage risk; consequently, activity has shifted away from the cash markets and the traditional instruments found within those markets. The Remolona Study estimates that this trend will persist as the class of derivative users widens, expands, and grows more familiar with these products, and as risk management and diversification motives become their driving force.[103]

(1) Growth in Exchange Markets

In 1992, more than 600 million contracts were traded on organized exchanges around the world. This figure represents an increase in volume exceeding 11% a year since 1986 (**See Chart 5**). The total value of such trading volumes exceeds $35 trillion per quarter.

(2) Growth in OTC Markets

The growth of financial derivatives in OTC markets surpasses the growth in exchange markets; here, total notional principal grew an estimated 40% per year during the period 1986 to 1991 to soar above $6 trillion by the end of 1991 (**See Chart 6**).

(3) Growth for Dealers Versus End-Users in the OTC market

Total notional principal for interest rate swaps and currency swaps outstanding for the past six years (1987-1992) demonstrate that growth in these OTC derivatives is largely customer, or demand driven. Although the ratio is decreasing for both interest rate and currency OTC transactions, total notional principal for end-users largely exceeds total notional principal for dealers. The margin is slightly greater for currency swaps, indicating that such transactions are more client-driven than interest rate transactions. Refer to **Charts 7 and 8** for a comparison of end-user versus dealer activity and growth in the usage of interest rate swaps, and to **Charts 9 and 10** for a comparison of end-user versus dealer activity and growth in the usage of currency swaps.

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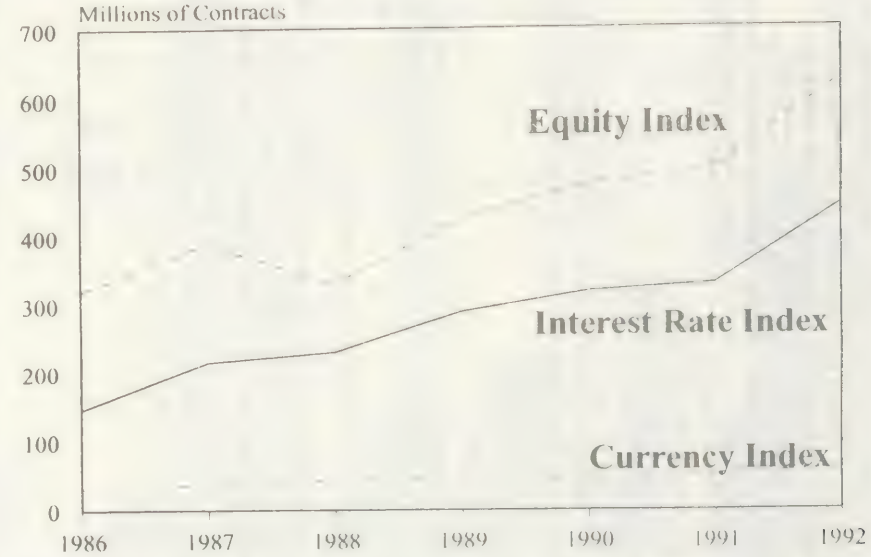
[102] Forward Rate Agreements (FRAs) make up the largest estimated component. These are agreements on future interest rates that involve no exchange of principal amounts. Surveys by the Bank for International Settlements suggest that FRAs represent a third of interest rate swaps outstanding in the U.S. and two-thirds of interest rate swaps outstanding in Europe.

[103] Remolona, Eli M., "The Recent Growth of Financial Derivative Markets," FRBNY Quarterly Review, Winter 1992-3.

Chart 5

Exchange-Traded Derivatives

Annual Trading Volume of Futures and Options Contracts



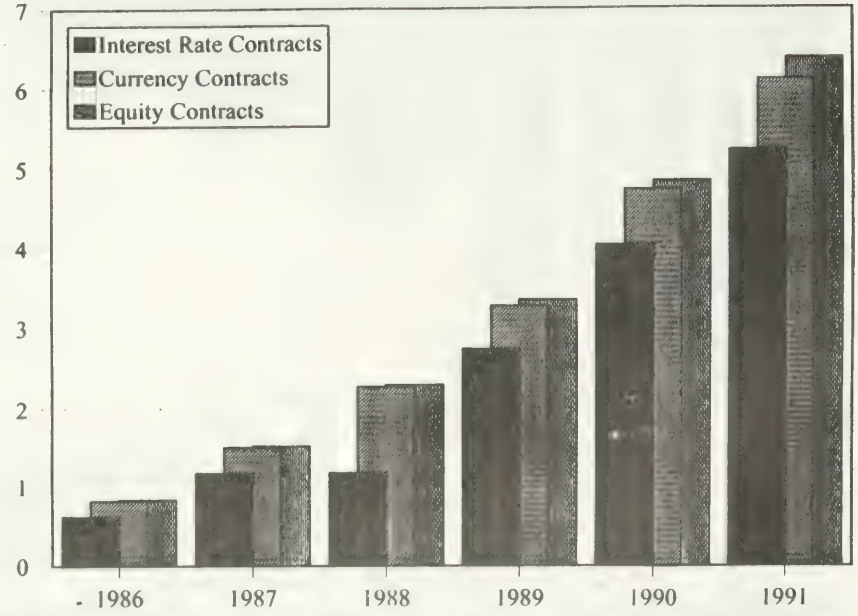
Sources: Bank for International Settlements, Futures Industry Assoc., Options Clearing Corp., Philadelphia Stock Exchange

Note: Values represent combined global volume of exchange-traded futures and options

Chart 6

Over-the-Counter Derivatives

Year-End Notional Principal in Trillions of Dollars



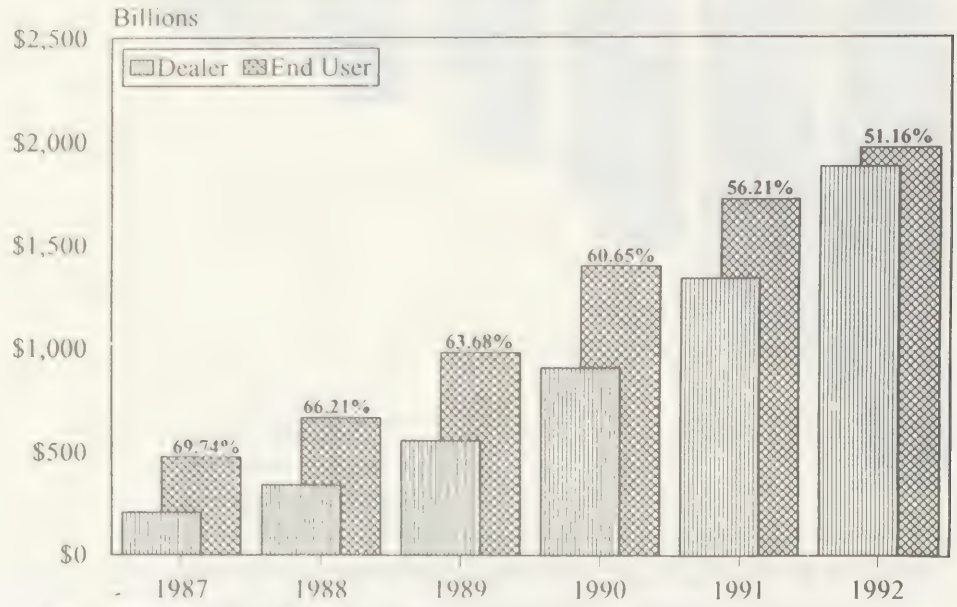
Sources: International Swap Dealers Assoc ; Bank for International Settlements; Federal Reserve Bank of N.Y. staff estimates.

75b

Chart 7

Total Interest Rate Swaps Outstanding

TNP $ Equivalent, End User Percent of Total



Source: International Swaps and Derivatives Association

TNP: Total Notional Principal

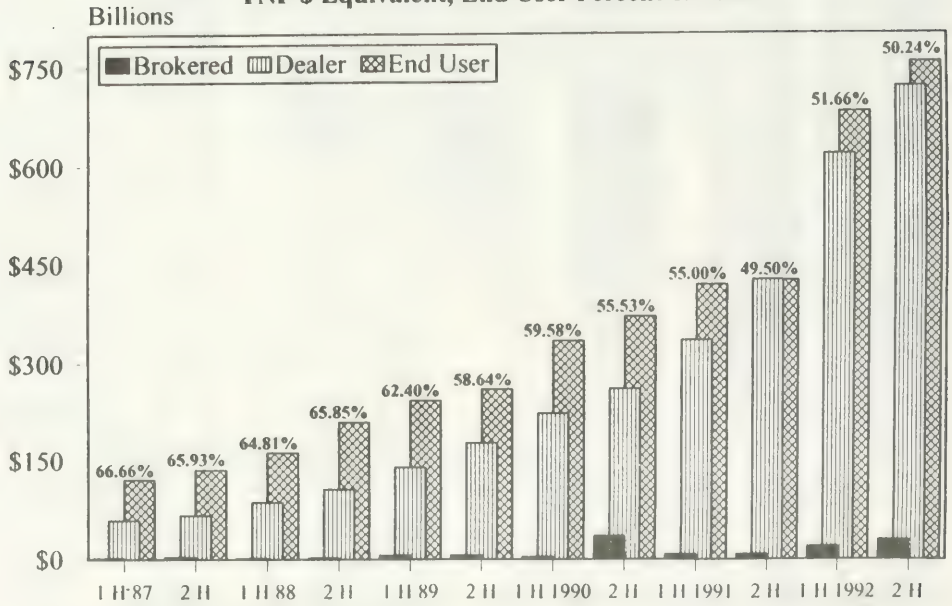
75c

Chart 8

Interest Rate Swap Activity

(New Business Generated During Period)

TNP $ Equivalent, End User Percent of Total



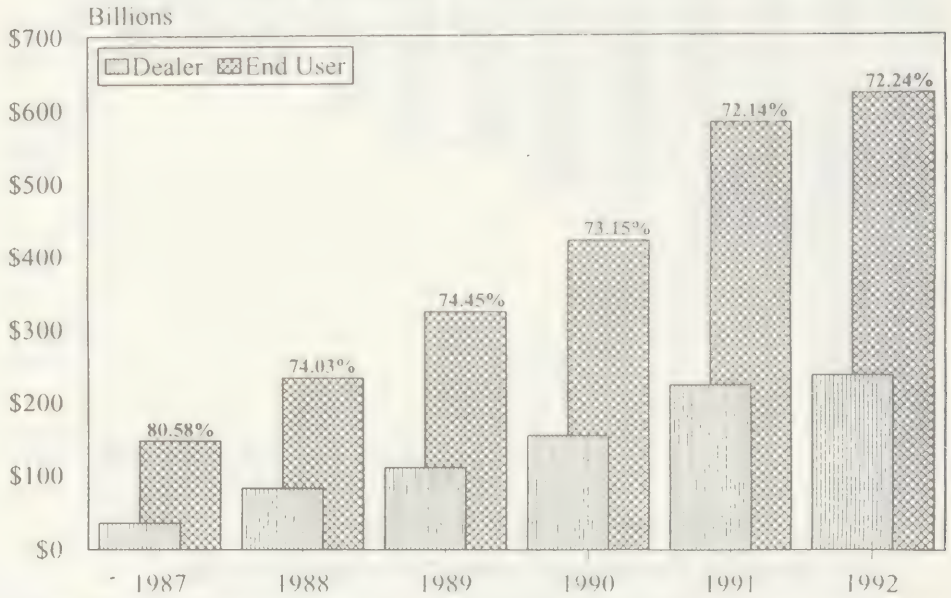
Source: International Swaps and Derivatives Association

TNP: Total Notional Principal

Chart 9

Total Currency Swaps Outstanding

TNP $ Equivalent, End User Percent of Total



Source: International Swaps and Derivatives Association

TNP: Total Notional Principal

75e

hedged and then purchase or sell an appropriate number of futures contracts to offset any price movement for the hedged cash position. Basis relationship fluctuate over time, however, and can change the extent to which the contracts provide a completely effective hedge. Consequently, the contracts may either become more profitable or costly to the holder than originally planned.

Basis Swap: *Interest payments exchanged are calculated from two different floating rate indices, e.g. three-month dollar LIBOR against the U.S. commercial paper composite rate.*

BBAIRS Terms: *British Bankers Association recommended terms and conditions for interest rate swaps; intended to be used in the London inter-bank market with maturities up to and including two years; published in 1985.*

Bear Market: *A market characterized by a trend of falling prices, in which there are more sellers than buyers.*

Bearer Participation Certificates (BPC): *These are issued by an intermediary corporation, usually a major bank or a trust company, in the case where a borrower is unable to issue securities into the Euromarket directly or through a finance company vehicle. The lead-managers pays the proceeds of such an issue to the intermediary corporation which then advances such proceeds to the borrower under a credit agreement. The intermediary corporation then delivers the BPC securities to the lead-manager for delivery to the subscriber.*

Bearer Security: *A negotiable security whose title is to the bearer, i.e. it is presumed in law to the owned by its holder. Title to bearer securities are transferred by deliver.*

Bearish: *A market view or opinion that expects lower prices.*

Benchmark Bond: *A bond, frequently the most recent, sizeable issue, whose terms set a standard for the market. The benchmark bond usually has the greater liquidity, the highest turnover, and is the most frequently quoted. In certain markets (e.g. the Japanese), there is a seasoning period during which the bond is not the benchmark.*

Benchmark Rate: *The base rate off which swap spreads are quoted. For U.S. $ swap, the benchmark rate is the rate for U.S. Treasuries.*

Beneficial Owner: *That person or institution to whom the benefits of a security's ownership will ultimately accrue.*

Beta: *A measure of how a stock's price movement compares to the movement of the entire market.*

Bid/Offer Price: *The price or yield on an instrument at which a dealer is willing to buy or sell upon request. The spread between bid and offer quotes is the price of the liquidity service provided by the dealer.*

Bid/Offer Spread: *The difference between the buying and selling price of an instrument.*

Bilateral Netting: *A proposed method for determining credit risk exposure positions which permits the offsetting of positions or payment obligations between two parties whereby a large number of individual positions or payment obligations are reduced to one single position or payment obligation, such that in the event of a counterparty's failure to perform due to default, bankruptcy or liquidation, the other counterparty would have a claim or payment obligation to receive or pay only the net value of the sum of unrealized gains and losses on all transactions.*

c. Growth by Type of Contract

(1) Interest Rate Contracts

Growth in derivatives in both organized and OTC markets has been dominated by contracts based on interest rates. In exchange markets, turnover in interest rate contracts grew 21% a year from 1986 to 1992 and accounted for 90% of the absolute increase in total exchange market volume (**See Chart 5**). Futures contracts accounted for the majority of this growth.

As in the exchange markets, most of the derivative growth in the OTC markets consisted of interest rate contracts (**See Chart 6**). Interest rate swaps, the dominant OTC derivative from the outset of the markets, grew an average of 41% a year in notional principal from 1986 to 1991 and alone accounted for possibly half of the absolute increase in total notional principal of all OTC derivatives during the same period (**See Chart 11**).

The Remolona study estimates that forward rate agreements grew roughly as fast as interest rate swaps and accounted for perhaps another quarter of the total market increase. Option-like interest rate contracts, including caps, floors, collars, and swaptions, probably grew the fastest of all OTC contracts, with notional principal rising 81% a year during the period to account for 10% of the total increase in the OTC market.

(2) Currency Contracts

Aside from interest rate contracts, currency contracts contributed the most to the growth in derivatives, though to a much lesser extent. The global foreign exchange system serves as the underlying market for these contracts.

In organized exchanges, trading in currency contracts rose about 8% a year, but accounted for less than 7% of the absolute increase in total exchange market turnover from 1986 to 1992 (**See Chart 5**). In the OTC market, currency swaps more than kept pace with interest rate swaps by growing 42% a year from 1986 to 1991, but traditional currency options probably expanded at only a fraction of that rate (**See Chart 6**). Currency swaps may have shown much stronger growth than other currency contracts because they are in part interest rate contracts, involving the exchange of fixed rate payments in one currency for floating rate payments in another.

(3) Equity Index Contracts

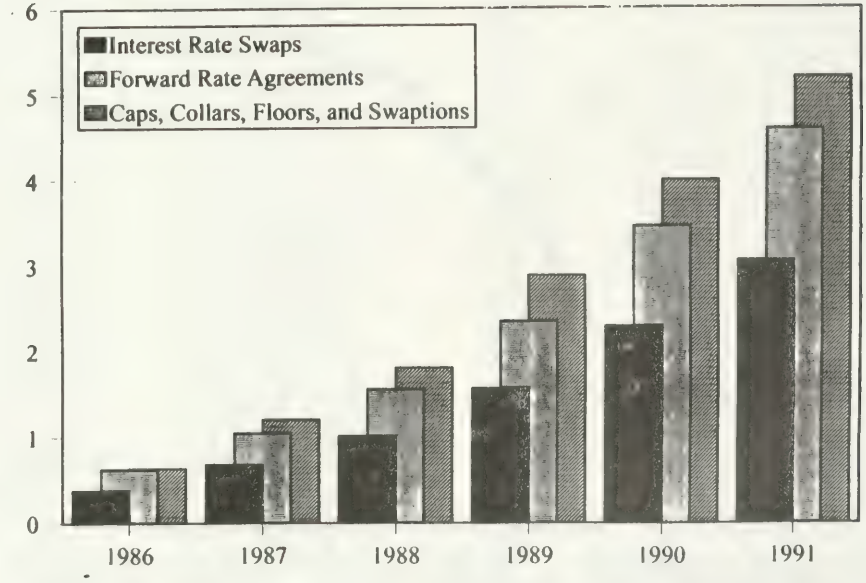
Equity index contracts are a small part of the whole derivative markets, but recent growth indicates that they promise to become a major part of the market in the near future. The major stock markets around the world serve as the underlying markets.

Exchange trading in equity index contracts showed no expansion over the period 1986 to 1992 as a whole because the turnover in U.S. exchanges declined sharply after

Chart 11

Over-the-Counter Interest Rate Derivatives

Year-End Notional Principal in Trillions of Dollars

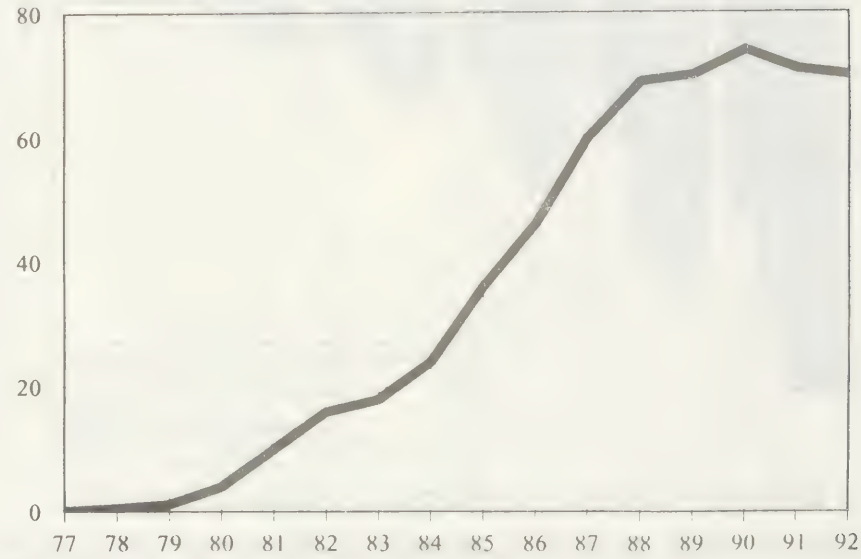


Sources: International Swap Dealers Assoc.; Bank for International Settlements; Federal Reserve Bank of N.Y. staff estimates.

Chart 12

Growth of U.S. Treasury Bond Futures

Annual Trading Volumes in Millions of Contracts



Sources: Chicago Board of Trade, Futures Industry Assoc

Note: Only contracts traded on the Chicago Board of Trade are included

the October 1987 stock market break (See Chart 5). Since 1988, however, equity index contracts have recovered so strongly that turnover in these contracts has grown faster than turnover in interest rate contracts. From 1988 to 1992, trading volumes in equity index contracts increased 14% a year. Even with growth coming from a small base, index contracts still accounted for a quarter of the absolute increase in total exchange market turnover in the period 1988-1992.

In the OTC market, equity index options and equity swaps have made up a small fraction of the market, but the last few years have witnessed such tremendous growth in these contracts that the Remolona Study estimates that they accounted for perhaps 5% of the expansion of notional principal in the OTC market from 1986 to 1991 (See Chart 6).

d. Geographical Growth

The geographical growth of financial derivatives manifested itself primarily in the opening of new derivative exchanges and the widening share of nondollar currencies in OTC derivatives.

(1) New Derivative Exchanges

The growth in the volume of exchange-traded derivatives was concentrated in exchanges outside the United States, most of them new ones. Between 1986 and 1992, a period when volume on U.S. derivative exchanges was barely growing, volume in European exchanges rose 47% a year and contributed the largest share of the growth in volume worldwide. Volume in exchanges in the Far East grew 29% a year during the period and contributed the next largest share of global volume growth. Since 1985, at least 18 new derivative exchanges have been organized around the world, including already established stock exchanges that only recently began trading derivatives.

(2) OTC Derivatives in Nondollar Currencies

The OTC markets operate internationally over telephone lines without a central clearinghouse to fix geographical locations. Transactions made in London may well be booked in Frankfurt. The increasing importance of nondollar currencies in OTC contracts indicates the geographical diffusion of these derivatives. The share of the nondollar sector in interest rate swaps widened from 20% in 1986 to 51% in 1991. The Japanese yen has been the most important nondollar currency; its share of interest rate swaps has doubled since 1987 to 16% in 1991. The pound sterling and German mark have been the next two most important currencies.

New financial tools which serve useful purposes often demonstrate impressive growth characteristics. Growth in the derivative markets has exceeded that of even the most popular financial instruments of the past, and evidence suggests that this trend is likely to continue. Rapid growth necessitates tight supervision and control; for these reasons, it is particularly important for regulators to not be complacent about the derivative markets.

B. RISKS ARISING FROM AND RISK MANAGEMENT OF DERIVATIVE PRODUCT TRANSACTIONS

Risks arising from derivative transactions are numerous and particularly important considering the magnitude of these transactions. According to industry sources,[104] the risks associated with derivative instruments are the same types of risks banking institutions face daily in their traditional functions. In addition, according to the OCC: "Financial derivative transactions currently represent a relatively small portion of the total credit, market, liquidity, and operational risk to which most banks are routinely exposed."[105] Derivatives restate these risks in a more complex format, and consequently require much stronger control and supervisory systems. It is generally agreed among market participants and experts in the field of financial derivatives that there are seven primary risks associated with derivative transactions, each in its own way an important component of, and critical to, the proper functioning of the overall market. This section defines and describes each risk, and provides examples for illustration purposes. In addition, a discussion on derivatives and systemic risk is provided at the end of this section.

1. COUNTERPARTY CREDIT RISK

All transactions which involve two or more parties contain an element of counterparty credit risk, more simply known as credit risk. Credit risk is the risk of loss in the event the counterparty to a transaction defaults, or otherwise fails to perform under the terms of a contract.

According to the Group of Thirty (G30)[106] and market participants, credit risk is greater in the trading of OTC derivative instruments than in the trading of exchange-traded instruments. The credit risk is greater primarily because contracts in the OTC market may not be settled for long periods of time, usually are not collateralized, and are not subject to clearinghouse offset, which functions to eliminate credit risk.

Despite this greater risk, ratings agencies such as Moody's and Standard & Poor's are of the opinion that banks benefit from derivative products. Moody's[107] has never changed an institution's rating solely on the basis of its derivative activities, and very few banks they rate have been materially affected by their derivative activities except in a positive way. Moody's does not think derivatives are a ticking time bomb for the banking industry as a whole. Standard & Poor's[108] indicates that banks benefit from

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[104] Unless otherwise noted, industry sources includes the firms, entities or other market participants the Minority Staff met with over the duration of this project.

[105] "Risk Management of Financial Derivatives," Banking Circular (BC-277), Office of the Comptroller of the Currency (OCC), October 27, 1993.

[106] Group of Thirty, Derivatives: Practices and Principles, Washington, D.C., July 1993.

[107] Lucas, Douglas, "Moody's Assessment of Derivative Risk," Moody's Special Comment, Moody's, June 1993.

[108] Azarchs, Tanya, "Banks Face Manageable Risks in Derivative Businesses," CreditWeek, November 1992.

derivative profits in that they are stable sources of income, and should be viewed as good-quality earnings for banks. David S. Berry, Director of Research of Keefe, Bruyette & Woods, Inc. noted that an important observation to make is that the major dealer banks have almost never posted a quarterly loss from their trading activities. Over the ten plus years covered, quarterly trading losses were posted only four times -- once by J.P. Morgan and three times by First Chicago. Cumulative losses incurred in those quarters were just $19 million. These are dwarfed by the trading revenues earned in the other quarters examined: $35.9 billion. The fact that the banks' trading revenues have been so consistently profitable indicates that the proprietary risk taken by banks in their trading activities is comparatively small and evidently well managed.

Credit exposure to the default of a counterparty is measured by market participants as the positive value, or current replacement cost of the contract. This replacement cost or positive value is derived from differences in the initial contract terms and the current market terms for an identical contract. Sources indicate that since most derivatives involving firm commitments such as forward rate agreements, futures and swaps, are entered into at no cost (other than possibly a nominal fee) to either party, they have zero value at origination and therefore no credit exposure at inception. At that point, the only potential risk is that subsequent changes in the market price of the instrument index or interest rate underlying the contract will create a positive contract value that might be forfeited in the event of a counterparty default.[109] Once market prices move to create a positive contract value, the contract has the current credit risk exposure of its replacement cost as well as the potential future credit risk[110] that can arise from subsequent changes in market prices.

Similarly, options and derivative contracts which contain options also face both current and potential credit exposure. However, there are slight differences. Option contracts have a positive value at inception reflected by the premium paid by the purchaser to the writer of the option. The value of the option may be reduced as a result of market movements, but cannot become negative (i.e., you can only lose the amount invested). Consequently, the party that buys the option contract will always have credit exposure (unless the option has zero value), and the party selling the option contract will not.

a. Measuring Credit Exposure

Standard methods exist for approximating current replacement cost. One technique is to calculate the value of an interest rate swap as the discounted present value of the cash flows a counterparty is expected to receive. This widely used technique allows current credit exposure to be estimated with confidence for the vast majority of contracts.

Current exposure is the market value of the derivative at a given time -- the cost

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[109] Counterparties are not exposed to the risk of losing the notional amount of the contract, as the notional amount is not owed by either counterparty, and instead is used to calculate payments.

[110] Bank regulators assess credit risk for capital purposes partly based on an add-on factor equal to 0-5% of the notional amount of contracts. This add-on is then multiplied by up to 50%.

of replacing the remaining cash flows at the prices and market interest rates prevailing when the event of termination occurs. The replacement cost could be positive or negative, depending on the direction of market forces and the evolution of the underlying instrument since the initiation of the transaction. When the replacement cost is negative, the remaining party incurs no loss if its counterparty defaults. The market value is approximated by marking contracts to market[111] at a certain time. Marking to market reflects the market value of a contract and is a good representation of how much the replacement cost is.

Replacement cost will typically be only a small percentage of the notional[112] principal amount of an OTC contract. For example, the net replacement cost from derivative activities at the 50 largest bank holding companies was 1.46% of the notional amount as of December 1992 (see **Chart 13**). In addition, credit exposure due to derivatives of the 50 largest bank holding companies represented 5.5% of the total credit exposure of the institutions at the end of 1992 (see **Chart 14**). While both parties to a single swap contract may be subject to credit risk during the life of the contract, normally only one party will be subject to credit risk at any one time.

Estimating the potential future credit exposure of derivatives is a far more difficult task. Given certain variables, such as the volatility of the price, index, or rate of the instrument underlying the contract, dealers and end-users are able to determine with some specificity the probability that a contract will incur a defined level of credit exposure.

Industry sources have stated that determination of potential exposure calls for an assessment of what the replacement cost of the derivative transaction could be in the future if the underlying variables that determine the value of the contract move adversely. Dealers use historical simulation studies, option valuation models and other statistical techniques to assess potential exposure. These techniques are used by dealers and end-users to generate two measures of potential exposure: "expected" exposure and maximum, or "worst case" exposure. The industry indicates that there appears to be widespread consistency in generating these two measures.

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[111] The trend among participants is to mark to market on a daily basis. Most dealers currently mark on this time basis. Some end-users mark to market on a monthly basis, but have indicated a desire to progressively alter their valuation to a daily basis.

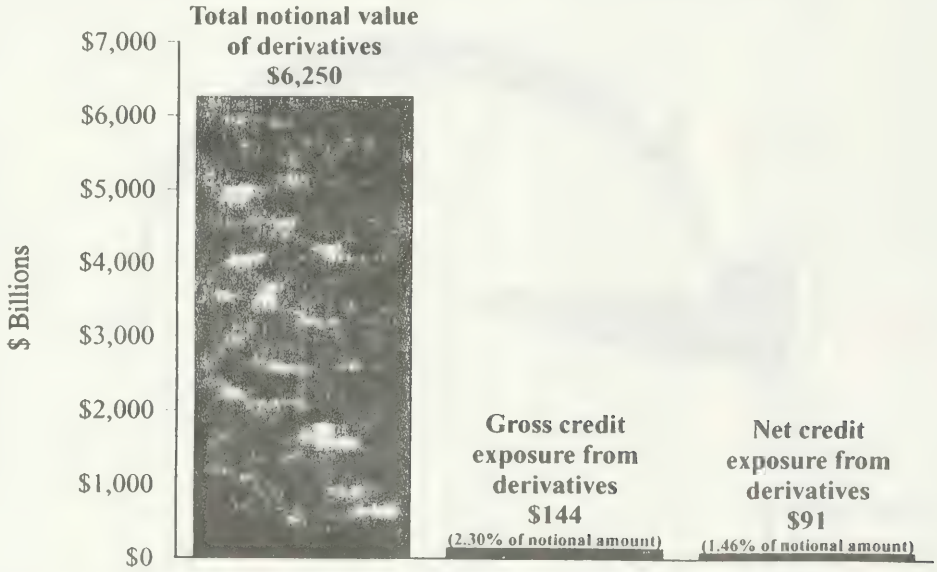
[112] It is critical to note that notional principal amounts cannot generally be used as a measure of risk exposure (either credit or market risk) for three main reasons: First, notional principal outstanding is not exchanged or owed and fails to account for offsetting exposures. Consider the following example: Suppose a bank enters into an interest rate swap with a corporation, paying a floating rate and receiving a fixed rate on $100 million of notional principal. At a later date, suppose the corporation decides to adjust its exposure by entering into another $100 million swap with the bank taking on the opposite interest rate exposure – the bank receives floating and pays fixed. A survey of the bank's swap book would now show $200 million in notional principal outstanding for this pair of transactions. This is so despite the fact that the economic pressures in the two swaps are offsetting. The same problem would apply if the corporation entered into a second swap with a different bank. A survey of the swap activity of all banks would count the two offsetting swaps as $200 million of notional principal outstanding. In addition, the $200 million of notional amount is not owed by either counterparty, is not at risk, and is used for calculation purposes only. If, instead, the corporation had negotiated an unwind of the initial swap, the notional principal outstanding from the pair of transactions would be zero. As a result, notional principal outstanding overstates the risk of exposure in derivatives.

Second, transactions of various maturities are simply added together without accounting for the differing sensitivities of the values of the contracts to changes in the value of the underlying (e.g., the interest rate risk of a one-year interest rate swap is not equal to that of a ten-year swap even if the notional principals are the same). Finally, different types of derivatives (e.g., interest rate versus currency swaps) have substantially different risk profiles. For these same reasons, figures on new contracts written cannot be used as a measure of risk exposures.

However, it is equally important to note that regulators measure credit risk partly by using a percentage of the notional amounts of derivative contracts, and also require disclosure of notional amounts for Call Report purposes.

Chart 13

Credit Exposure (Replacement Costs) from Derivatives Activities at the 50 Largest Bank Holding Companies

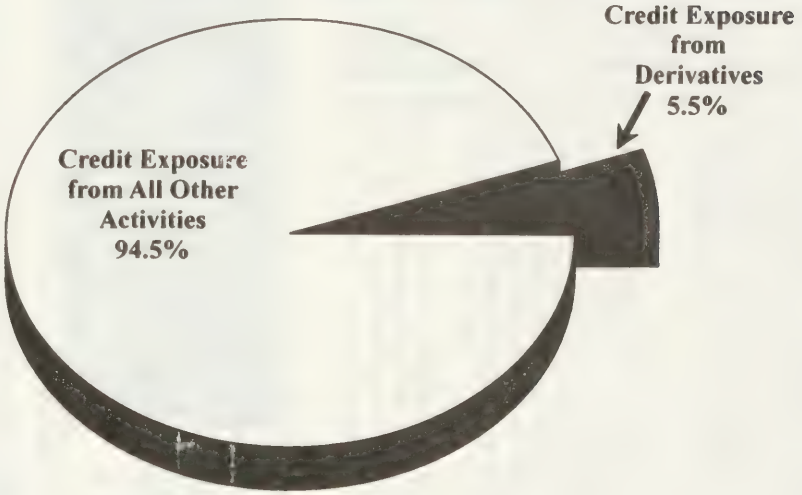


Source: *Consolidated Reports of Condition and Income*, submitted by insured banks to their primary federal regulators, Dec. 1992.

Note: Net credit exposure for derivatives is calculated from gross credit exposure by assuming 41% of swaps contracts are subject to enforceable master netting agreements. Forward foreign exchange contracts assumed, not yet subject to netting agreements.

Chart 14

Total Credit Exposure at the 50 Largest Bank Holding Companies



Source: *Consolidated Reports of Condition and Income* submitted by insured banks to their primary federal regulators, Dec. 1992.
Note: Total credit exposure includes total loans and leases, federal funds sold, reverse repurchase agreements, loan commitments, standby letters of credit and securities lent.

According to industry sources, expected exposure at any point during the life of the swap is "the mean of all possible replacement costs, where the replacement cost in any outcome is equal to the market value, if positive, and zero, if negative." They state that expected exposure is the best estimate of the present value of the positive exposure, or credit risk, that is likely to materialize.

The maximum potential exposure is calculated by market participants as an estimate of "worst case" exposure at any point. These calculations are based on adverse movements in the underlying variables that are sufficiently extreme that they are unlikely to be exceeded. Various market participants had different models to estimate "worst case." The models were generally similar in terms of methodology, but different in the parameters used.

Market participants stated that the analysis of potential exposure profiles enables management to evaluate credit exposures on derivative transactions on a comparable basis with credit exposures for on-balance sheet transactions, such as loans. Consequently, such analysis is fundamental to the viability of an organization which uses derivatives. Institutions typically disclose in their annual reports and other financial reports their replacement cost exposures due to derivative activities. This amount represents the exposure if all counterparties default simultaneously.

A G30 survey of industry practice reveals that approximately 66% of dealers use internally developed methods to assess credit risk that are based on maximum exposure calculations using historical volatilities. Only 22% of dealers surveyed use the Original Exposure Method (OEM), which is a static model of credit risk, and only 12% of dealers surveyed intend to use the OEM in the future.

While credit risk is certainly an important consideration, counterparty default in a derivative transaction does not always cause a loss. For a credit loss to occur on a forward or swap transaction for example, two conditions must co-exist -- that the counterparty defaults and that the replacement cost of the transaction (i.e., the exposure) is positive.[113] Derivatives allow institutions to alter their balance sheet without the risk of losing principal, as they would if a counterparty defaulted on a loan.

Counterparty risk in options is one-sided. Sources point out that the buyer of an option typically pays in full for the option at contract initiation. The seller, however, is not required to perform until the option is exercised. This exposes the buyer to credit risk in that the seller may default prior to fulfilling the commitment under the option.

(1) Credit Risk for Exchange-Traded Versus OTC Derivatives

The credit exposure of derivatives traded on exchanges is different than derivatives traded OTC. Research shows that ordinary exchanges use two devices to

[113] This is in contrast to the one-sided credit exposure of a loan. Default requires only that the borrower be in financial distress. Moreover, the creditor faces default risk on interest payments and the unamortized principal of a loan throughout its life. In a forward or swap, the notional principle generally is not at risk. This is not true for the principal of a loan. These differences explain why the impact of credit differentials on swap spreads are much smaller than on loans.

manage and virtually eliminate credit risk.

(a) Position Valuation: The value of each position is marked-to-market at the end of each trading day. The change in value of the position is paid to or received from the exchange at the end of every day. The performance period of a contract is reduced to one day, and the risk of counterparty default declines accordingly.

(b) Collateral Requirement: All exchange market participants are required to post collateral known as margin for all futures transactions and for the sale of all options transactions. If the value of the position should fall, causing the margin account to decrease below a preset maintenance level, payment is required to bring the margin account back to the appropriate level.

In acting as the buyer for each sale and the seller of each purchase for exchange-traded derivatives, the exchange itself is the counterparty to all trades. The clearinghouse mechanism of the exchange substitutes the combined creditworthiness of exchange members for that of an individual counterparty. Given this, industry sources agree that counterparty credit risk in ordinary exchanges is significantly reduced.

In contrast, the Minority Staff discovered that the bilateral nature of OTC derivative transactions, along with their generally longer performance period (owing to the absence of the standardized collateral requirements and daily settlements) can lead to higher levels of counterparty credit exposure. Data, confirmed by Minority Staff meetings with market participants and industry representatives, indicates that the presence of credit risk effectively limits participation in these highly competitive markets primarily to financially strong institutions. Even among these financially strong institutions, management and market discipline as well as regulatory oversight are structured to limit both risk taking and active involvement by institutions that show signs of financial problems. Counterparties routinely reduce exposures to weakening institutions by reducing the volume and maturity of transactions they conduct with those institutions, and by requiring collateral to mitigate credit risk.

Credit risk, according to market participants, is predictable and controllable. Factoring in a potential increase to the mark to market[114] value allows dealers and end-users to accurately portray their credit risks and act accordingly by requiring collateral or by reducing the scope of activity with troubled participants.

Aside from the mark-to-market and allowances for potential increases, other parameters are available to market participants to help them assess credit risks. The credit quality of the counterparty is clearly a primary factor in determining whether to even enter into an agreement with that counterparty. As stated before, entities generally cannot even participate in these markets unless they meet certain stringent criteria such as quality of credit. Other parameters include collateral, documentation provisions, and choice of instrument complexity (from plain vanilla to highly customized agreement).

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[114] Some have suggested that marking to market is too difficult, imprecise, and misleading. Rationale for this stems from the complexity of accurately determining the value of an exotic, custom-tailored investment with numerous value components. Critics argue that there is no basis for determining value because the instrument is unique, and consequently, mark to market can be misleading. Proponents argue that by breaking down a derivative contract into its component "plain vanilla" parts, and valuing each part, an accurate measure of value can be determined.

Credit risks, however, although relatively simple to control and administer, are very real. The Minority Staff found that market participants clearly recognize this and account for it in their risk management functions.

b. Managing Credit Exposure

The first step in managing credit risks is the ability to understand them. The Minority Staff found that market participants appear to understand these risks and consequently were prepared to manage them.

Market participants indicate that the credit risk in derivatives is generally addressed through counterparty credit evaluation and by the use of risk limits for counterparties. The credit quality of the users of global derivatives is typically high. For less creditworthy counterparties,[115] credit enhancement methods such as collateral are often employed.

The principles of managing credit risks appear to be the same as for traditional banking products. This is consistent with the premise that derivative risks are more or less comparable to traditional banking product risks. Specifically, the evaluation of the credit exposures of derivative transactions is made on a comparable basis with those exposures for on-balance-sheet activities.[116]

There was a consensus among sources that the credit risk in OTC derivative products can be protected against and managed by several principal activities: requiring collateral, maintaining adequate capital, requiring netting agreements, thorough analysis of credit quality, and duration of contracts. Generally, counterparties also will reduce credit exposures to weakening institutions by reducing the volume and maturity of transactions they conduct with those institutions. The issue of netting is particularly important; the amount of counterparty credit risk associated with derivatives can be substantially decreased if the counterparties enter into legally enforceable netting agreements. For a comparison of net exposure, with netting, versus gross exposure at bank holding companies, **see Chart 13**.

Throughout the Minority Staff's meetings with market participants, and in consulting research sources, it was discovered that dealers adopt policies and procedures to manage counterparty credit risk including, primarily:

(1) Internal controls

Internal controls ensure that credit risk is assessed prior to entering into transactions with a given counterparty and that credit risk is monitored over the life of the transaction. Internal controls fall under the umbrella of operating risk, discussed in

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[115] This does not indicate poor credit quality, as all participants must be highly rated to even enter the markets.

[116] For comparison purposes, a "Loan Equivalency Measure" is used to correlate on- and off-balance exposures. A Loan Equivalency Measure is an equivalent measure of on-balance sheet exposure for the off-balance risk created by a financial derivative transaction.

detail later in this section.[117] Important internal controls to minimize credit risk include:

(a) Establishment of appropriate guidelines, policies and procedures to assess and manage credit risk. This includes tight supervision and approval by senior management. Guidelines, policies and procedures should be applied before entering into a transaction and maintained throughout the duration of the transaction. The bank regulators as well as the Group of Thirty suggested that for derivative dealers, the establishment of credit lines and the monitoring of credit exposures should be done by an independent credit analysis group, rather than by people directly involved in the execution of the transaction (e.g., marketing or trading personnel). They, as well as industry sources, concurred that end-users also should follow comparable procedures. Separation of responsibility is intended to prevent conflicts of interest and to ensure that the assessment of credit exposure is done objectively.

(b) Only personnel with significant expertise in the field of derivatives should be employed to conduct and participate in these activities. Market participants agree that while professional expertise is essential in any field, it is particularly important for derivatives. Regulators concurred in their responses.

(2) Documentation

Sound internal control practices and guidelines, policies and procedures are the first step in managing credit risk. Market participants also agree that proper documentation will also help reduce and control credit exposure to counterparties. Trade organizations and other professionals have developed standard master agreements which address the risks relating to derivatives.

The International Swaps & Derivatives Association (ISDA) was formed to, among other things, standardize and simplify rate swap documentation.[118] In 1985, ISDA published the first edition of the Code of Standard Wording Assumptions and Provisions for Swaps (the "Swaps Code"). In 1986, ISDA published the second edition of the Swaps Code. ISDA published two forms of master swap agreements in 1987. In 1992, ISDA revised the two forms and released them as the most current swap master agreements. The ISDA agreements are structured so that the counterparties execute a master agreement intended to set the general terms and conditions for all future swap transactions entered into between the counterparties. Subsequent transactions are handled through supplements that indicate the exact terms of each transaction.

The Minority Staff found that there is some divergence on what forms of language should be contained within the documents, but it is generally agreed that in terms of documentation, master agreements currently in place cover the principal elements required for proper functioning of the derivative markets.

It should be noted that the use of multiple master agreements between two parties may introduce the risk of "cherry-picking" between, or among master agreements.

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[117] See Section B4.: Operating Risk.

[118] Capatides, Michael G., A Guide to the Capital Markets Activities of Banks and Bank Holding Companies, Bowne Printing, 1990.

Market participants agree that in general, dealers are well served by using a single master agreement.

(3) Strategies for Credit Enhancement and Risk Reduction

As part of the ongoing study, the Minority Staff attempted to confirm with market participants what kind of strategies they employed for credit enhancement and credit risk reduction. General consensus revolved around two main points:

(a) Reduce the probability of default: Reducing the probability of default includes taking standard cautionary measures to appropriately evaluate counterparties. This includes credit evaluation using public information such as credit ratings, and proprietary models; the degree of complexity of the derivative transactions entered into; and duration of the agreements.

Some derivative dealers have recently enhanced their credit ratings by establishing special purpose vehicles, or special operating subsidiaries with a credit rating that is higher than the parent.[119] This serves to eliminate many of the basic concerns, such as credit risk exposure, faced by participants in this industry.

(b) Reduce the exposure on the underlying transaction: The Minority Staff found that use of collateral arrangements varies considerably across participants, from those who always require it to those who require it only on a periodic basis. Some entities require counterparties to post collateral regardless of credit standing; others operate more on a "know your counterparty" basis, where good faith sometimes substitutes for collateral. Although collateral arrangements vary, the trend for usage of collateral requirements appears to be rising. Collateral is posted based on the mark-to-market exposure on the underlying transaction.[120]

Reducing exposure on underlying transactions also involves selectivity in the type of transactions between counterparties. Duration of contracts is an important consideration, as is the level of complexity of the agreement itself. Complexity ranges from "plain vanilla" to highly-technical transactions which require special consideration.

As derivative activity evolves, participants will naturally continue to develop new strategies to manage and reduce credit risk. Some participants will undoubtedly seek new ways to bolster their creditworthiness with capital-based structures, while others will pursue solutions that are based less on capital and more on limiting exposure on a periodic basis through such devices as collateral arrangements. Under either approach, market participants agree that increased netting arrangements that are legally enforceable will play a major role in reducing credit risk.

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[119] See section on Separately Capitalized Subsidiaries, Section A.4.a.(5): Separately Capitalized Subsidiaries, for details. Also see responses to Question #11 posed to the regulators by Representative Leach.

[120] More on collateral is contained in Section B.1.c.: Collateral.

(4) Reserve Method for Managing Credit Risk

The reserve method for assessing and managing credit risk automatically sets aside a specific reserve to cover potential credit risk associated with each derivative transaction. This method is used, for example, by certain derivative dealers who set side a reserve for credit risk calculated separately from any regulatory capital requirement.

c. Collateral Protection Against Credit Risk

Collateral[121] is an important factor in the management of risks associated with derivative activities. Collateral arrangements can be unilateral or bilateral. Unilateral agreements require one counterparty to deliver collateral on trades in which it has a negative mark-to-market value. In this case, the other counterparty in the transaction is not required to post collateral. Unilateral collateral arrangements generally are used when one of the counterparties is less creditworthy than the other. Bilateral collateral arrangements require two-way movement of collateral whereby the counterparty with the negative mark-to-market value collateralizes the exposure to the other party.

Collateral arrangements are always negotiated by the counterparties to address the concerns of both parties. As such, collateral arrangements differ according to the conditions under which collateral must be provided, the amount of up-front collateral required (if any), and the frequency with which collateral calculations are made. Specifically, some collateral arrangements are structured so that the obligation of a counterparty to post collateral is triggered[122] by an event such as a credit downgrade or material adverse change in financial condition whereby the other party has "reasonable grounds for insecurity," or a specified threshold level of exposure has been reached. It should be noted that trigger provisions based on a credit downgrade or other adverse changes have the potential to create sudden and sizeable liquidity requirements.[123] Derivative dealers and end-users should carefully consider their capacity and the capacity of their counterparty to meet such potential liquidity requirements when they negotiate such provisions.[124]

A counterparty can enhance its own credit standing by agreeing to post collateral to reduce or offset the exposure in a derivative transaction. In an enforceable collateral arrangement, if the counterparty that pledged collateral were to default, the other counterparty would be entitled to use the collateral to offset payment of the defaulted

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[121] This section addresses the traditional uses of collateral. For a separate discussion of collateral as it applies to clearinghouse offset, refer to **Section D.3.: Collateral Settlement Proposal**.

[122] Some market participants have negotiated contracts that require the posting of collateral if certain "triggering events" occur. In some cases, the triggering event is based on the size of exposure using market values; in other cases it may be based on the creditworthiness of the counterparty. For example, an AAA rated company may be required under a derivative contract to deliver collateral should its credit rating decline to a BBB grade.

[123] See **Section B.5.: Market Liquidity Risk** for further details.

[124] See **Section B.8.: Systemic Risk** for further details.

obligation.[125]

To enhance the enforceability of collateral arrangements, a security agreement addendum may be attached to the customer master agreement. The agreements generally are customized according to the needs of the counterparties. If all trades made between the two counterparties within a particular product group -- that is, all cities, branches, subsidiaries, or affiliates -- are netted, then the collateral agreement would reflect this and thus avoid sending collateral to one location while receiving collateral from another.

If netting applies and is enforceable, the collateral is generally based on the net[126] negative mark-to-market value of a position. If netting does not apply, the collateral arrangement is often on a gross[127] basis. The most common form of collateral is cash and government securities. The security interest on the collateral typically is required to be perfected with delivery mechanics and further assurances as demanded by the secured party.

Collateral arrangements represent a small portion of gross credit exposure. Most dealers report that less than 5% of their gross credit exposure to counterparties is collateralized;[128] similarly, less than 5% of their counterparties' gross exposure to the dealers is reported to be collateralized. This is in sharp contrast to collateral arrangements in the exchange markets, where all market participants are required to post collateral known as margin.

(1) Views on Collateral from the Regulatory Community

Collateral is the margin deposited by customers to their FCMs and clearing members to the clearing organization, in the case of exchange markets, and to counterparties, in the case of OTC markets, to secure their performance on the contracts they hold.

Regulators[129] agree that the use of collateral is increasing among participants in the financial derivative markets, and they expect this trend to continue. Regulators also

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[125] The OCC published a Notice of Proposed Rulemaking on Collateralized Transactions which would amend the risk-based capital guidelines to lower the risk weight from 20% to 0% for particular transactions that are collateralized by cash or government securities. According to the OCC, this risk-based treatment would more accurately reflect the minimal operational risk and the near absence of credit risk for certain transactions.

[126] Positions are examined with respect to all members collectively.

[127] Positions are examined for each member individually.

[128] The degree to which participants in the OTC markets require collateral varies significantly. Some entities always require collateral, regardless of the financial condition of the counterparty; others only require collateral under specified circumstances.

[129] Office of the Comptroller of the Currency (OCC); Federal Deposit Insurance Corporation (FDIC); Office of Thrift Supervision (OTS); Federal Reserve Board (FED); Securities and Exchange Commission (SEC); New York State Banking Board (NYSBB); and Commodity Futures Trading Commission (CFTC). See responses to Question #17 posed to the regulators by Representative Leach.

agree that prudent uses of collateral arrangements will add to the stability[130] in the derivative markets by limiting credit exposures.[131] According to the FDIC, collateral arrangements are appropriate given that excessive or unwarranted exposure on an unsecured basis would be subject to regulatory criticism on safety and soundness grounds. The SEC noted several benefits from the maintenance of adequate margin levels. First, adequate margin serves to reduce speculative trading by highly leveraged participants, and second, adequate margin levels reduce the capital exposure of broker-dealers and clearing firms during periods of market volatility.

The FED quantified their favorable judgement of using collateral in derivative transactions. According to their answers, "use of collateral must be incorporated in the overall context of the institution's credit process...banks should still conduct a detailed credit risk analysis that includes a careful evaluation of the counterparty's overall ability and willingness to perform on a contract as agreed." They added: "Once the creditworthiness is determined, the bank should establish limits, [and at that time] consider the value of any collateral that reduces credit risk." Given this, the FED stated that "obtaining collateral does not exempt the bank from following basic credit analysis procedures."

In agreeing with the other regulators that collateral arrangements are appropriate, the FED noted that "the use of collateral...is an acceptable practice provided certain minimum safeguards are met." They identified the safeguards as 1) the bank having control of the collateral, and that it should be readily marketable, and 2) the bank should have the ability to terminate the contract if the collateral becomes impaired, and have the ability to substitute or liquidate the collateral in a timely manner.

The regulators noted several drawbacks associated with collateral. The OCC, for example, has discouraged banks from encumbering significant amounts of their highest quality, and most liquid assets. They added that "bank managers should ensure that sufficient amounts of other liquidity sources would be available to meet funding needs in stable as well as deteriorating scenarios." The OCC also discourages banks from entering into arrangements where only the bank is required to post collateral.[132] The SEC noted that "although it may be preferable that all transactions be collateralized, industry competition may make this impracticable."

The OTS suggested that "excessive collateral requirements might discourage the use of derivatives for risk reduction purposes." They added that "mandatory collateral requirements could reduce liquidity in the derivative markets." On this topic, however, the OCC noted that "increased use of collateral arrangements should also improve market liquidity because such arrangements would enable more participants to access

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[130] The CFTC noted that during the October 1987 financial markets crash, the daily clearance and settlement systems for the exchange markets functioned well despite margin flows of unprecedented size, reaching as much as $2.5 billion on a single day. On the exchange markets during this period, no customer funds were lost as a result of an FCM failure or default and, in fact, no FCM failed during this critical period.

[131] The OTS reported that savings associations are required to restrict their choice of counterparties to banks and well-capitalized nonbank counterparties.

[132] This is an example of a unilateral collateral arrangement. Unilateral arrangements are typically used when one of the counterparties is less creditworthy than the other.

these markets."[133]

The FED reported that excessive reliance on collateral triggers, particularly those based on creditworthiness, can be imprudent. Such collateral arrangements could place substantial liquidity pressures on a counterparty just when its creditworthiness is weakening and its access to liquidity is more limited.

As with any other factor which serves to support an activity, imprudent or excessive uses of collateral will be detrimental to the very purpose of the activity.

2. MARKET RISK

The market risk of a derivative, like other financial instruments, is the risk of a decline in the value of the contract arising from adverse movements in the price, index, or rate of the instrument underlying the contract. Market risk depends both on the potential magnitude of changes in the underlying asset (often termed its "volatility") and on the relationship between changes in the value of the underlying asset with the value of the derivative. The latter factor, the "price sensitivity" of the derivative, can vary considerably depending on the terms of the derivative contract. For options, in particular, the price sensitivity may vary considerably as the price of the underlying asset changes.

The market risk of derivatives, like that of any other financial instrument, by definition depends upon their price behavior when market conditions change. In order to explain this behavior, a dealer or end-user must identify the components of market risk and understand their interaction. The assessment of market risk relies on a mark-to-market valuation of derivatives and the underlying instruments which may serve as hedges.

Derivative participants agree that because the market risk of the derivative product is related to the market risk of the underlying asset, the underlying asset may be used to offset the market risk of the derivative. Some say that the appropriate approach to measuring market risk is not to measure the price sensitivity of the individual contract, but of the portfolio of contracts and related assets and liabilities that a particular dealer holds. Thus, the market risk that a swap dealer is subject to, and for which his capital should be assessed, would be the net change in the value of the swap portfolio,[134] along with the change in the value of any instruments used to offset the portfolio (e.g., debt securities or interest rate or currency futures), that would result from anticipated changes in the relevant price or rate.

One of the more severe problems in measuring market risk is the possibility of

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[133] Collateral is widely perceived as being beneficial and conducive to participation in the financial derivative markets. It is important to note, however, that mandatory collateral requirements which are too high will be assessed by certain firms as too costly, and will consequently prevent them from entering into transactions. Determining the appropriate level of collateral to fulfill its purpose while balancing its cost repercussion is a delicate and critical component of risk management.

[134] The International Swap Dealers Association has developed a master agreement that allows an intermediary to combine all of its transactions with a defaulted counterparty and establish a final net payment. Accordingly, it is argued that regulators should recognize netting in their capital guidelines by applying the charges to the net and not the gross amount of credit risk. The problem with this approach is that, although netting generally is legally recognized in U.S. bankruptcy law, its legal status is uncertain in some countries.

mispricing derivative products. Because prices of specific OTC derivatives products generally are not publicly available, prices of derivatives must be determined using financial models. But over-reliance on a financial model could cause a firm significant harm. For example, reliance on a financial model that incorrectly predicts future volatility of the underlying instrument may lead to financial distress or even cause the failure of a weaker firm. This leads to issues of systemic risk, which are contained at the end of this section.

a. Valuing Derivative Portfolios

The Group of Thirty, in their Global Derivatives Study Group Report of July 1993, summarized the opinion of market participants by emphasizing that the challenge of market risk management begins with proper valuation of derivative portfolios. According to their July 1993 publication, Derivatives: Practices and Principles, members of the Group of Thirty study group stated that it is essential for market participants to apply appropriate methodologies in valuing their derivative portfolios. Incorrect valuation leads not only to inaccurate income recognition, but also to inaccurate hedging.

Of the dealers responding to the G30 survey, 85% indicate that, for risk management purposes, they mark their derivative portfolios to market as opposed to other valuation techniques, such as lower-of-cost-or-market or accruals accounting. Of the dealers that currently do not mark to market, the majority have plans to begin marking to market in the future. Large, or "global, full-range" dealers tend to mark to market to a greater extent than dealers with a more limited scope of activity. In meetings with market participants in New York, the Minority Staff found that all dealers mark on a daily basis; some end-users mark less frequently -- on a monthly basis for example.

Many dealers do not run perfectly matched derivative portfolios. For those dealers, rebalancing and rehedging their portfolios with market moves and the passage of time requires the ability to value portfolios frequently, even intra-day in the case of some option portfolios. 77% of responding dealers to the G30 Report indicate that they value their portfolios on a daily basis. A higher percentage of large and global dealers mark daily, compared with smaller or purely domestic dealers. Among end-users that use derivatives, 54% value their positions daily and 38% monthly.

b. Measuring Market Risk

Risk managers within the derivatives industry have developed and continue to develop various ways to quantify market risks. The G30 survey results suggest that, when measuring market risk, 43% of dealers quantify the maximum loss for an arbitrary specified scenario, while 30% responded that they employ a value-at-risk measurement. About 50% of large dealers employ a value-at-risk measurement.[135]

There are conflicting reports on the value-at-risk method. In meetings with

[135] See Section B.2.b.(1): Value-at-Risk Method.

market participants, several did not agree with the G30's assessment of value-at-risk. Each entity had its own specific method of measuring market risk and while each method appropriately quantified this risk, the use of different parameters varied from firm to firm.

Measuring market risk under all but the simplest method raises certain technical challenges: first, dealers must establish a measure of risk that can be applied to a wide variety of derivatives. This is especially relevant for large and more diverse dealers, which must aggregate and assess risks across a wide array of derivatives and markets. Second, dealers must make assumptions about underlying volatility and correlations for both instruments and markets. In addition, they must address issues such as the appropriate time horizon to use in determining historical or implied volatility and correlations and whether this data suitably predicts future levels.

Another challenge involves quantifying and preparing for the consequences of abnormal market conditions when the assumptions that are valid under normal markets no longer apply. The G30 survey indicates that 61% of all dealers -- 80% of large dealers -- address this challenge through some kind of stress simulation of their portfolios.

(1) Value at Risk Method for Managing Market Risk

The value at risk method for assessing and managing market risks assigns a single number, called the value at risk, to measure the amount a firm has at risk due to market fluctuations. Industry sources suggest that most dealers know and consider some or all of the components of market risk. However, the use of one consistent measure of market risk, such as value at risk, is more prevalent among large dealers.

Value at risk is the expected loss from an adverse market movement with a specified probability over a particular period of time. For example, a value at risk calculation using two standard deviations is designed to predict that with 97.5% probability, any change in portfolio value over one day resulting from an adverse market movement will not exceed a specific amount. (The calculation predicts that there is only a 2.5% probability that the value of the portfolio will exceed the specific amount.) Value at risk encompasses changes in all major risk components such as absolute price or rate change (delta), convexity (gamma), volatility (vega), time decay (theta), discount rate (rho), and basis or correlation.

Recommendation 5 of the July 1993 Group of Thirty report entitled Derivatives: Practices and Principles[136] suggests that dealers should use a consistent measure, such as value at risk, to calculate daily the market risk of their derivative positions and compare it to market risk limits.

According to Group of Thirty report, once a method of risk measurement is in place, market risk limits must be determined based on factors such as: management appetite for risk versus return, capital resources, expected profitability, and business

[136] For further information, see Section I.L: Group of Thirty and more detail in Appendix H.

strategy.

According to certain industry practitioners with whom Minority Staff spoke, the recommendation that firms should calculate a value at risk number seems to be provocative, if not controversial. Such practitioners felt that, in general, assigning one number to market risk would be neither accurate or possible. In addition, such participants stated that the level of activity and the related technology varies from firm to firm, making this recommendation impractical and/or unnecessary for many market participants.

The question of whether an institution should be required to disclose[137] a market risk measure derived from internal models is one the federal banking agencies have issued for public comment in connection with their proposal for interest rate risk.[138] Pending industry comments, the FED, for example, is undecided about the specific nature of such disclosures. SEC regulations applicable to financial reporting exceed requirements under GAAP by requiring disclosure of information that is indicative of a registrant's market risk exposure from on-balance sheet items. A number of industry practitioners with whom Minority Staff spoke felt that a value at risk number would be useful for some institutions as an internal risk management tool; however, they felt that to disclose such a number could be counterproductive and misunderstood by the marketplace. Each firm, for example, would use different assumptions in their calculations of a value at risk number based upon their business objectives. In that way, value at risk numbers would not be comparable from firm to firm.

Alternatively, David Mullins, Vice Chairman, Board of Governors of the Federal Reserve System, stated in an address to ISDA[139] that "Finally and importantly, one wonders whether the recommendations on disclosure (Recommendation 20) go far enough to address the serious deficiencies that the study notes. Noticeably absent from recommended disclosure is a summary measure of market-risk exposure."

(2) Stress Test Simulations

Stress test simulations[140] are used by many financial institutions and by virtually all large and sophisticated banks to identify and assess risks. They can be valuable analytical tools, particularly for determining the impact of "worst-case" scenarios.[141]

The FED suggests that "firms should conduct a variety of stress test simulations and should also vary the scenarios examined as the nature of risks and the firm's exposure to them evolve." Other regulators concurred that stress tests are an important

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[137] The Group of Thirty report recommended that the value at risk number be calculated, not disclosed.

[138] For comments made by regulators on market risk disclosure, see Question #13 posed to regulators by Representative Leach.

[139] Remarks from the Global Derivatives Study Sponsored by the Group of Thirty before the International Swaps and Derivatives Association, Summer Conference, July 28, 1993.

[140] Also see responses to Question #16 posed to regulators by Representative Leach.

[141] Source: Federal Reserve Board and Federal Deposit Insurance Corporation responses.

component of risk management, and are particularly useful in raising a firm's awareness of the potential and magnitude of change that could occur should various market forces move against them unexpectedly.

The FDIC noted that stress test methodologies tend to require complex mathematical models and extensive data bases, and that even the most sophisticated models are only as good as the assumptions implicit in the underlying data, and remain subject to individual interpretation. On this topic, the FED added that simulations should not be limited to results of computer models. The FED suggested that firms should develop contingency plans that involve operation procedures, such as the response to power failures, to settlement or liquidity problems, to programming errors that misprice financial products, or to the loss of key personnel. In other words, firms should consider stress testing in several areas of their operations, and not only to prepare for market and credit risk exposures.

Stress testing for credit risk would need to focus on concentration risk. Testing in this area is particularly important should proposals on clearinghouse offset for the OTC markets be advanced or implemented.[142] Stress testing for market risk should include assessing the effect of unusually large movements[143] in interest rates or exchange rates. Stress testing for liquidity risks should include estimations of cash flow needs and collateral usage under a range of market conditions. In addition, to evaluate liquidity risk, firms should consider declines in the firm's own credit standing as well as major market disruptions such as the 1987 stock market crash.

Regulators do not always require that entities perform stress tests.[144] However, the Minority Staff, through interviews and discussion with dealers, end-users and other market participants, discovered that firms using derivatives[145] in one context or another, have sophisticated stress-testing mechanisms in place to account for sudden shocks or other low-probability market disruptions.

When managing market risk, according to industry sources, dealers must look beyond the particular contracts and focus instead on identifying the fundamental risks they contain so the overall portfolio can be decomposed into underlying risk factors that can be quantified and managed. The fundamental risks that must be identified[146] include the following:

(a) **Absolute price or rate (delta) risk:** This is the exposure to a change in the value of a transaction or portfolio corresponding to a given change in the price of an underlying instrument;

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[142] See Section D.: Clearinghouse Proposals for the Swaps Markets.

[143] For example, several standard deviations from current price, or as the largest price move observed over a recent historical period.

[144] The OCC, for example, does not require banks to conduct formal stress testing to determine potential losses due to credit risk.

[145] The degree of computer sophistication which firms use to conduct stress tests varies in the industry. The Minority Staff's meeting with Reuters highlighted this point when they demonstrated different software packages designed to implement stress testing methodologies to account for these risks.

[146] According to industry sources and published data.

(b) **Convexity (gamma) risk:** This is the risk that arises when the relationship between the price of an underlying instrument and the value of a transaction or portfolio is not linear. The greater the non-linearity (i.e., convexity) the greater the risk;[147]

(c) **Volatility (vega) risk:** This is typically associated with options and is the exposure to a change in the value of a transaction or portfolio resulting from a given change in the expected volatility of the price of an underlying instrument;

(d) **Time decay (theta) risk:** This is typically associated with options and is the exposure to a change in the value of a transaction or portfolio arising from the passage of time;

(e) **Basis or correlation risk:** This is the exposure of a transaction or portfolio of differences in the price performance of the derivatives it contains and their hedges; and

(f) **Discount rate (rho) risk:** This is the exposure to a change in the value of a transaction or portfolio corresponding to a change in the rate used for discounting future cash flows.

(3) Identifying the Risks of Individual Derivatives

Market risks are best analyzed in terms of the fundamental risks associated with the two basic types of derivatives they may contain: forward-based and option-based derivatives.[148] The fundamental risks of both types of transactions are summarized below.

(a) Forward-Based Derivatives: The market risks of forward-based derivatives are relatively straightforward since the dominant risk is absolute price or rate risk. Changes in the price of the underlying instrument result in proportional changes in the value of the derivative. Forward-based derivatives generally do not have significant exposure to convexity (gamma) risk. The simplicity of the market risk profile of these derivatives makes hedging and monitoring risk easier than for option-based derivatives.

(b) Option-Based Derivatives: The risks inherent in option-based derivatives are more complex. The valuation of options is based upon a set of theories and mathematical models built on foundations first developed in the 1970s. One of the key contributions was the option valuation model developed by Fisher Black and Myron Scholes. The Black-Scholes model identifies five factors that determine the value of many options:

- The price of the underlying financial instrument;
- The exercise price of the option;

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[147] Convexity or gamma risk is measured by the expected change in the delta of a single transaction or a portfolio in response to a change in the price of an underlying.

[148] Group of Thirty, Derivatives: Practices and Principles, Washington, D.C., July 1993.

- The time to expiration of the option;
- The volatility of the price of the underlying instrument; and
- The discount rate over the life of the option.

The relationship between the price of an option and the price of its underlying is not constant, as is the case with forward-based derivatives. For instance, if the value of the option changes by 50% of the change in the price of the underlying financial instrument at a given price of the underlying instrument, it may change by 70% at a different price. Therefore, the price sensitivity of an option's value changes with changes in the price of the underlying instrument, so that options create exposures to the risk of gaps in prices of the underlying instrument as well as directional movements.

Options also create exposure to volatility risk. Changes in the expected volatility of the underlying financial instrument will affect the value of the option, even if the price of the underlying instrument remains constant. The passage of time also affects the value of an option because of time decay -- the reduction in the likelihood that the option will end up in-the-money (or further in-the-money) as the time to expiration is reduced.

(4) Equity Attribution Method for Managing Risks

An equity attribution method is designed to assess and manage all risks associated with derivatives and other products by attributing capital to products and profit centers based on assessed risk. This process evaluates overall risk and capital adequacy and assesses risk versus reward of various activities.

The best example of an equity attribution method seems to be a method utilized by Bankers Trust called Risk-Adjusted Return on Capital (RAROC).[149] RAROC is used to assess the risk associated with all activities of Bankers Trust, including loans and derivatives. RAROC attributes capital to products, including derivatives, and profit centers based on assessed overall risk. The risks associated with each product are separated and quantified. (RAROC capital is neither book nor equity capital, although it can coincide with them, but is the sum of separate capital attributions charged to the firm's risk-taking activities.) RAROC has the effect of assigning equity to all risk types, including credit, interest rate, currency, equity, commodity, options, liquidity, and operational risk. Subjectivity is limited, according to Bankers Trust, primarily to setting the credit risk rating for a counterparty. The RAROC calculation places a heavy cost on illiquidity and extended durations.

RAROC quantifies risk by tracking the historical loss experienced in different markets, and attributes capital to cover 99% of the maximum expected loss. RAROC also assumes that the risk will take at least a year to unwind, whether or not the exposure was intended to be over a year.

Credit risk, for example, is managed through RAROC by assigning a RAROC

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[149] For more information, see: Bankers Trust 1992 Annual report; April 10, 1993 issue of The Economist; and February 2, 1993 issue of "Unified Equity Research: Commercial Banks" by Salomon Brothers.

credit rating level to each counterparty. The performance of a counterparty versus its RAROC rating level is monitored by the credit staff. A credit audit function reviews each counterparty and borrower separately, and takes into account ratings assigned by independent credit rating agencies. If a rating assigned to a counterparty by a credit rating agency conflicts with Bankers Trust's credit audit rating of a counterparty, Bankers Trust abides by its own credit audit rating.

According to Bankers Trust, RAROC allows for the fungibility of capital between businesses according to return and portfolio management criteria. This concept is used for performance measurement, internal decision making, and capital adequacy determination. When used as a performance measurement device to measure the relative risk between various businesses, earnings are compared with the internal risk rating, duration and risk amount. Line managers can use RAROC to judge the profitability of different products and decide where to direct more effort. Divisional managers use it to measure the performance of line managers, and top managers use it to measure the performance of each division. Efforts would be directed at those products and divisions which earn the highest return for the lowest risks and capital.

Although Bankers Trust assigns capital to all areas of the business, it does not allocate fixed amounts. Divisions must compete for capital and are charged for how much they actually use. Managers, therefore, have a constant incentive to optimize their risk-taking. If returns justify taking on more risk, senior managers have the option of raising real capital to expand the firm's capacity. Alternatively, they might decide to abandon some activities altogether.

For example, a trader uses RAROC to value individual transactions and a portfolio of transactions. A swap trader assesses the return of an individual transaction, and if the return is not acceptable, the trader can reprice the deal or turn it down. Bankers Trust enforces limits on trading positions. In some markets, if a trader loses 10% of his/her RAROC capital in a month, the trader must stop trading until the following month. If a trader loses 30% of his/her RAROC capital over a year, all his/her trading authority is extinguished. The trader can also use RAROC to assess the riskiness of the entire trading book. If a proposed deal reduces the overall riskiness of the trading book, the trader will attract less capital and may be able to price the swap more cheaply.

A daily snapshot of RAROC usage is taken to the global market's balance sheet, and this "report card" is given to the CFO. The CFO reviews the RAROC totals on an ongoing basis, measuring the amount in aggregate and the diversification level of the capital. Management then decides where best to employ the capital, and assesses the capacity for growth at the firm.

3. SETTLEMENT RISK

Settlement risk[150] is the exposure to loss arising when an institution either pays out funds or delivers assets before receiving assets or payment from its counterparty. For example, in foreign exchange markets, the time differences between normal payment hours in different countries can create time gaps between offsetting payments from a single transaction, exposing institutions to settlement risk during that period (Herstatt Risk -- named after the 1974 failure of the Bankhaus Herstatt). In another form, settlement risk can occur when delivery of securities is not synchronized with payment for them.

One aspect of settlement risk results from the fact that few financial transactions are settled on a same-day basis, or simultaneously. In the U.S. equity markets, for example, the difference between the trade date and settlement is at present five days. As a result, one party could suffer a loss if the price moved in their favor and the counterparty refused to exchange on the settlement date. The largest settlement exposures, however, typically occur on the settlement day itself when the full value of the security can be at risk if delivery of the security and delivery of the payment are not synchronized.

Settlement risk in derivatives is reduced greatly by the widespread use of the payment netting provisions of master agreements. This reduces the settlement risk of payments made in the same currency. In addition, for many derivative transactions (e.g., interest rate swaps), principal amounts are not exchanged on the maturity date. Payment netting, however, does not address currency settlement risk.[151] The largest source of settlement risk in payment systems is the settlement exposure created by foreign currency trades -- spot and short-dated forwards. While derivative activities would benefit from a reduction of Herstatt risk, it must be noted that the amounts involved in derivatives are very small relative to the amounts involved in traditional foreign exchange activities. It has been estimated by the International Swaps and Derivatives Association (ISDA) that daily global cash flows from interest rate swaps and currency swaps average $0.65 billion and $1.9 billion, respectively. In contrast, the BIS Central Bank Survey of Foreign Exchange Market Activity in April 1992 estimated daily global net turnover in foreign exchange spot and forward markets at $400 billion and $420 billion, respectively.

4. OPERATING RISK

Operating risk is the risk that inadequate internal controls, procedures, human error, system failure, or fraud can result in unexpected losses. This could lead, for example, to open positions or credit exposures that exceed established limits. These risks are increased by the complexity of derivative instruments and the sophisticated mathematical models used to price and hedge these instruments.

According to industry sources, and confirmed with market participants, developing

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[150] "Derivative Product Activities of Commercial Banks," Joint Study conducted in response to Questions Posed by Senator Riegle on Derivative Products, January 27, 1993.

[151] For currency swaps, the notional amounts are often exchanged and then re-exchanged at settlement.

a systems, operations, and control capability that meets the requirements of a derivative activity calls for attention at three levels: the people involved in the business, the systems they use, and the operations, control, and audit framework that underpins the activity. Dealers, large and small, and end-users face this common challenge of developing the right control culture for their derivative activities.

The G30 survey of industry practice examined the involvement in the derivative activities of people at all levels of the organization. 93% of dealers surveyed indicate at least some understanding at the board level. 71% of end-users indicate that they have at least a sufficient board-level understanding relative to the use of derivatives in their organizations. 30% to 40% of dealers and end-users have at least one board member with relevant derivative experiences. Participants recognize the importance of training; most dealers address this need through in-house seminars and on-the-job training.

The survey confirms the view that dealing in derivatives can demand thorough and comprehensive integrated systems to ensure adequate information and operational control. The main challenge with respect to systems is reflected in strong intentions among dealers toward more integrated systems, between front and back-office functions and across types of transactions. With respect to operational controls, the survey indicates that the main trend is the increasing use of independent risk management functions to monitor procedures and risks.

Industry participants, academics and regulators all emphasize that the complexity of derivatives requires special emphasis on maintaining adequate human and systems controls to validate and monitor the transactions and positions of dealers. Industry sources generally agree that the main types of internal controls, depending upon the level of derivatives and the sophistication of the institution, include the following:

a. Oversight of Informed and Involved Senior Management

The role of senior management is critical to the proper functioning of any enterprise, and is particularly important for conducting derivative activities. In meetings with the Minority Staff, market participants repeatedly emphasized that senior management needs to be aware and apprised of the risks involved in these markets, and what controls are in place to account for these risks.[152] There is a clear danger on relying on too few specialists[153] in a new and rapidly emerging industry. Experienced personnel is required at all levels, and active participation and supervision is fundamentally necessary.

b. Systems

In the rapidly changing world of derivatives, new product innovations are on the verge of, or actually are in some instances, outdistancing the ability of systems and

[152] This was the number one recommendation of the Group of Thirty, most dealers and end-users, and other entities related to the industry that the Minority Staff met with over the course of preparing this Report.

[153] Also see responses to Question #19 posed to regulators by Representative Leach.

technology to keep pace. There has been a huge investment on the part of dealers and end-users to track and assess these products, and vigilance is needed in this area.

c. Operations

Parallel to systems, the operations of a market participant in the derivatives business needs to be exceptional given the rapidly changing nature of the markets. Recording, documenting and confirming the activities of participants is fundamental to the proper functioning of the market. Particular features of derivatives aside from the traditional back-office functions that require proven expertise, include the following:

- Continued product development creates the need for systems of great flexibility to cope with the variety of instruments -- especially, as is usually the case, when back-office systems are integrated with the rest of the business;

- The complexity of the products requires considerable care in the input of trades and in the confirmation-matching process to ensure that errors are detected; and

- The long time periods between the trade date and the date on which settlement first occurs, which is a feature of some products, means that errors not detected by the confirmation process may not be discovered for some time.

d. Controls

As discussed previously, internal controls are critical to the derivatives business. The primary element of control lies in the organization itself. Allocation of responsibilities for derivative activities, with segregation of authority where appropriate, should be reflected in job descriptions and organization charts. It is the role of management to ensure that the conduct of activity be consistent with delegated authority.

e. Audit

Internal auditing plays an important role in the procedures and control framework by providing an independent, internal assessment of the effectiveness of the framework. To carry out its role effectively, it is important that the internal audit function meet certain key criteria:

- It should be demonstrably independent of line management, with a direct reporting line to senior management;

- It should possess adequate resources with people of appropriate knowledge and calibre;

- It should use appropriate audit methodologies for planning, performing, controlling, and reporting the results of their work; and

- It should examine the critical areas of the business with appropriate frequency.

- It should oversee compensation policies to ensure that undue risk taking is not an incentive.

The principal challenge for management is to ensure that the internal audit staff has sufficient expertise to carry out work in both the front and back offices. Considerable investment in training is needed to ensure that staff understands the nature and characteristics of the instruments being transacted, the parameters involved, and the models that are used to price them.

5. MARKET LIQUIDITY RISK

Market liquidity risk is the risk that a financial asset or off-balance sheet instrument cannot be sold or replaced quickly at, or very close to, its fundamental value. Market liquidity can change gradually over time, or rapidly in times of market stress, and in some markets can vary significantly over the course of the trading day. Over time, increased transaction size and more aggressive short-term trading strategies have meant that market-makers are sometimes swamped by one-way market moves. As a result, obtaining two-way prices near the market at all times or for large transactions has become more difficult than in the past.[154] This gives rise to day-to-day liquidity risks which, it is important to note, are different from a sudden erosion of liquidity in a particular market segment. Such a sudden erosion could occur as a result of an unusually sharp price or volatility shock, or because of the withdrawal of a key market-maker.[155]

It is widely accepted that liquidity risk is of greater consequence the greater a firm's involvement in the derivatives business, the greater its reliance on short-term funding, the lower its credit standing, and the more restricted is its access to central bank discount or borrowing facilities. Many banks, particularly those with high credit ratings, appear therefore to be less concerned about liquidity risk than institutions not having a direct link to the central bank. Securities firms are subject to greater challenges with respect to cash requirements, particularly in the derivatives business, where market conditions can change quickly and perceptions regarding their credit standing may necessitate increased margin payments. Although of less concern, banks are subject to liquidity risk; however, opportunities to resolve a liquidity crisis for banks are greater.

The Promisel Report indicated that a number of firms indicated that they assess liquidity requirements arising from sizable and unexpected market shifts. Some firms forecast cash needs based on historical data, and some firms run regular liquidation analyses to determine whether a firm can survive a "run." These simulations assess how fast the firm's assets could be called and liabilities withdrawn in the event that all bank lines or unsecured lending were cut off (the experiences of Drexel and Salomon, for

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[154] Report prepared by a Working Group established by the Central Banks of the Group of Ten countries, "Recent Developments in International Interbank Relations," (the Promisel Report) Bank for International Settlements, Basle, Switzerland, October 1992.

[155] This ties in to systemic risks and proposals for the establishment of a clearinghouse offset mechanism for OTC markets. See information on derivatives and systemic risk at the end of this section, and information on clearinghouse proposals for the swaps markets in Section D.: Clearinghouse Proposals for the Swaps Markets for details.

example).[156]

Exchange-traded derivatives are less subject to market liquidity risks than are OTC-traded derivatives because of their use of standardized contracts and the settlement role of the clearinghouse. As discussed previously, exchange-traded instruments serve to provide liquidity in those markets. By comparison, and also as discussed before, the credit risk and the lack of standardized contracts entailed in OTC-traded derivatives may result in periods of reduced liquidity and, thus, may increase the chance of a sudden erosion of liquidity in a particular OTC market segment.

Market liquidity risk is typically associated with the possibility that a large transaction in a particular instrument could have a discernible effect on the price of the instrument. This market impact effect increases the cost of hedging. In illiquid markets, moreover, bid-ask spreads are likely to be larger, further increasing that cost. A related phenomenon is the risk of an unexpected and sudden erosion of liquidity, possibly as a result of a sharp price move or jump in volatility.

By breaking the market risk of a particular product down into its fundamental elements, however, dealers are able to move beyond product liability to risk liquidity. For example, the interest rate risk of a complicated U.S. dollar interest rate swap can be hedged with other swaps, FRAs, Eurodollar futures contracts, treasury notes, or even bank loans and deposits. The customized swap may appear to be illiquid but, if its component risks are not, then other dealers can effectively acquire the transaction and hedge it.

A risk related to liquidity risk is the massive leverage that a firm dealing in derivative products can attain.[157] Because many of the contracts are conducted in entities not subject to margin or capital adequacy regulations and do not involve initial outlays of funds, the amount of derivative instruments that an unregulated or inadequately regulated financial derivative intermediary can enter into is limited only by its creditworthiness and the willingness of its counterparties to do business with it.

6. LEGAL RISK

Legal risk is the risk of loss because a contract cannot be enforced. This includes risks arising from insufficient documentation, insufficient capacity or authority of a counterparty (ultra vires -- beyond the scope or authority), uncertain legality, and unenforceability in bankruptcy or insolvency.

Legal risk presents perhaps the greatest risk participants face in derivative transactions. The International Swaps and Derivatives Association (ISDA) recently

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[156] Also see Section H.2.: Case Studies Involving Failed or Failing Counterparties.

[157] Many derivatives allow dealers and investors to take huge market positions without paying full price. In some derivative trades, no money changes hands at all. This may serve to reduce investors' costs, but it also means that a lot of leverage is created in the system.

sponsored a survey of default experiences among a diverse group of its members.[158] At those institutions, cumulative losses over the 10-year history of their involvement in swaps totaled $358 million. Almost half of these losses was attributable to English local authorities -- the result of the decision in the U.K. House of Lords in the Hammersmith and Fulham case which held that English local authorities did not have the capacity to enter swap and other derivative transactions.[159]

As discussed before, several organizations around the world have developed standard documentation (master agreements) for global derivative transactions which helps deal with and reduce enforceability risks. These organizations direct their efforts at reducing risks, as well as identifying the most effective methods to approach technical documentation issues.

According to industry sources, there are five principal enforceability risks which can occur at different stages of an OTC derivative transaction, as follows:

a. Contract Formation: The Statute of Frauds

Due to the growth in derivative activities over the last 10 years documentation was often delayed -- a problem known as "backlog." In the early days of derivatives, documentation backlog became commonplace and some transactions went undocumented for long periods of time. This created a legal risk that a counterparty with unrealized losses could disaffirm the transaction before a writing was executed by asserting the Statute of Frauds.[160]

Laws in England, France, Germany, and the Canadian provinces of British Columbia and Quebec, for example, do not require that a contract for a derivative transaction take any particular form (i.e., an oral agreement is sufficient). New York, however, has two different provisions that require a writing (i.e., two different statute of fraud provisions).[161] As an example of the uncertainties that can arise under laws written before OTC derivatives were developed, New York case law has created some

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[158] The group surveyed represented over 70% of the $4.34 trillion volume (measured by notional principal amount) as reported by the year-end 1991.

[159] In January 1991, the U.K. House of Lords held that the London Borough of Hammersmith and Fulham lacked the necessary capacity to enter into interest rate swap contracts it had entered into during the 1980s, and therefore was not liable to make payments on those contracts on which it would otherwise have suffered large losses. The losses suffered by swap dealers as a result of this decision are estimated to represent over 50% of total losses due to defaults on swaps since the inception of swap activity (the decision emphasizes the desirability of clear legal authority as to the capacity of parties to enter into derivative transactions). The Local Government Act 1972, from which local authorities derive their powers, does not include any express power for local authorities to enter into derivative transactions and the House of Lords found no implied powers whether for hedging purposes or otherwise. Prior to the House of Lords decision, the question of the capacity of local authorities to enter into swaps had been discussed with certain regulatory bodies and with legal counsel, and a not uncommon view was that local authorities had the capacity to enter into swaps as a risk management tool in certain circumstances.

[160] The Statute of Frauds is the common designation of a very celebrated English statute, passed in 1677, which has been adopted, in more or less modified form, in nearly all of the United States. Its chief characteristic is the provision that no suit or action shall be maintained on certain classes of contracts or engagements unless there shall be a note or memorandum thereof in writing signed by the party to be charged or by his authorized agent (e.g., contracts for the sale of goods priced at $500 or more; and contracts for the sale of land). Its object was to close the door to numerous frauds and perjuries. It is more fully known as the "statute of frauds and perjuries."

[161] New York General Obligations Law § 5-701 and New York Uniform Commercial Code § 2-201.

uncertainty as to which of the two statute of frauds provisions apply to various types of derivative transactions. Because the requirements of the two provisions differ somewhat, counterparties dealing under New York law may wonder whether they have adequately satisfied the applicable statute of frauds and created an enforceable agreement.

To resolve the uncertainty in New York regarding the formation of derivative contracts, efforts are being made to amend New York's statute of fraud. An amendment was recently introduced in the New York State Senate which would remove legal uncertainty for transactions governed by New York law by allowing one statute of frauds provision to apply to all "qualified financial contracts," a term defined more broadly than the definition of "swap agreement" in the U.S. Bankruptcy Code. The proposal also attempts to take account of new technologies to record or document derivative transactions by providing that a telex, facsimile, computer retrieval, or other process by which electronic signals are transmitted by telephone or otherwise would qualify as a "writing" for statute of frauds purposes.[162]

b. Capacity

Capacity is generally defined as a borrower's ability to pay an obligation when due. Numerous entities use derivative transactions to manage financial risks, and capacity concerns regarding derivatives are not particularly relevant for major corporations and financial institutions. However, the issue does arise in relation to agreements with other entities such as state and local governments. In this case, questions may arise as to whether that entity, or the person representing the entity, has the capacity to enter into such a transaction or whether the transaction is beyond its capacity (i.e., ultra vires).

As a result of the Hammersmith and Fulham decision, dealers have become cautious about entering into swaps and other derivatives with governmental entities in jurisdictions where those entities' capacity to enter into the transactions in question is not clearly set forth in statute. This also applies to other entities where similar concerns apply.

c. Early Termination: Bankruptcy/Insolvency/Liquidation

According to market participants, another area presenting major legal enforceability concerns is early termination. The specific issue is whether the nondefaulting party to a derivative master agreement would be able to enforce the provisions entitling it to terminate the agreement and net out or offset termination values and payment amounts (i.e., close-out netting) upon the bankruptcy, insolvency or liquidation of its counterparty.

The U.S Bankruptcy Code, FIRREA and FDICIA all contain provisions regarding the netting of obligations between financial market participants in the event that one of the participants fails. The Federal Reserve has suggested that it may be desirable to

[162] Group of Thirty, Derivatives: Practices and Principles, Washington, D.C., July 1993, Appendix A, page 49.

have a single standard as to what types of netting contracts are covered. Uniformity would help provide certainty to financial market participants regarding the extent of netting coverage.[163]

The FDICIA provisions are the most comprehensive, validating both bilateral and multilateral netting in the event of a default. Neither FIRREA nor the Bankruptcy Code explicitly covers both bilateral and multilateral netting. The FDICIA provisions are designed to promote efficiency and reduce risk in the financial markets.

An area of concern was that in a proceeding under the U.S. Bankruptcy Code, termination rights under master swap agreements were subject to an automatic stay.[164] Thus, the ability to terminate the master agreement and enforce the close-out netting provisions could be delayed for a long time. Moreover, although it was generally believed that a U.S. bankruptcy court should give effect to essential elements of a master agreement, such as netting of transaction values upon early termination, there was no guarantee that this would be the result. The considerable degree of legal certainty, however, that can be achieved in this area is illustrated by legislative amendments and new legislation that have been adopted in certain jurisdictions, including the United States.[165]

d. Multibranch and Multiproduct Netting Arrangements

Banks use multibranch master agreements to "book" individual derivative transactions through any branch designated in the agreement. The use of such master agreements involves a netting issue that has not received sufficient attention from participants and regulators: whether upon the insolvency of a counterparty, parties to a multibranch master agreement can terminate that agreement and net across branches to achieve one net amount owed by or to a counterparty.

In addition, if a party seeks to net across product types, there is uncertainty as to whether the master agreements should be treated as one single executory contract which can be immediately terminated. If the agreements are treated as separate executory

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[163] Federal Reserve Board Responses. Also see responses to Question #12 posed to the regulators by Representative Leach.

[164] The Bankruptcy Code does allow exceptions to its automatic stay provisions for certain types of financial contracts. In the event of the bankruptcy of one party, the Code allows counterparties to exercise their contractual rights to liquidate securities contracts, commodities contracts, forward contracts, repurchase agreements, and swap agreements. The Bankruptcy Code applies to virtually all entities, with the primary exceptions of depository institutions and insurance companies.

[165] Legislation adopted in the U.S. offers a high degree of legal certainty that bilateral close-out termination provisions will be upheld in insolvency proceedings. In 1990, amendments were adopted to the U.S. Bankruptcy Code that provide certainty for parties dealing with U.S. corporations through provisions applicable to "swap agreements," these amendments create an exception to the automatic stay to allow a nonbankrupt party to set off any mutual obligations arising under or in connection with any "swap agreement" following a bankruptcy filing, and to use any collateral held to satisfy amounts due from the bankrupt party (Section 362(b)(14) of the U.S. Bankruptcy Code, 11 U.S.C. § 362(b)(14)). They also expressly recognize that parties will be entitled to exercise contractual rights to terminate a "swap agreement" and net or offset termination values and payment amounts under that agreement (Section 560 of the U.S. Bankruptcy Code, 11 U.S.C. § 560).

In 1989, FIRREA provided to U.S. banks and savings institutions benefits similar to those provided to U.S corporations. Finally, in 1991, FDICIA was enacted, providing certainty for "financial institutions" that are parties to a "netting contract" (such as the ISDA Master Agreements), regardless of the types of derivative transactions it documents.

contracts, there is a risk of selective repudiation and added uncertainty and delay.[166]

e. Legality/Enforceability of Derivative Transactions

In some jurisdictions, issues exist relating to the legality or enforceability of derivative transactions generally. Brazil, Canada, Japan, and Singapore each indicates that issues exist whether swaps or other derivative transactions could be deemed gambling contracts, and thus illegal or unenforceable. In Australia, it is a recognized concern that a derivative contract may be classified as a gaming or wagering contract and thus invalid, because the state and territory legislation does not define the terms "gaming" or "wagering."[167]

In the United States, specifically in New York, three statutes bear on the legality issue with respect to gambling.[168] The first, a criminal statute, proscribes the act of "promoting gambling;"[169] the second, also a criminal statute, proscribes operating a "bucket shop" (i.e., selling cash-settled option contracts;)[170] and the third statute voids all contracts for wagering on a contingent event.[171] There was once a risk that a court might use one of these three statutes to invalidate a swap agreement; however, the exemptions from the Commodity Exchange Act provided to swap agreements and hybrid instruments substantially reduce this concern.[172]

Another legality issue involves whether derivative transactions could be held subject to the laws applicable to futures contracts. If parties fail to comply with such laws, these transactions may be deemed illegal and unenforceable. Reports from some jurisdictions also indicate that certain laws that regulate entering into a futures contract may apply to derivative transactions. Again, this concern once existed in the United States; however, the exemption for swap agreements and hybrid instruments noted above reduces this risk as well.[173]

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[166] Source: Federal Deposit Insurance Corporation.

[167] Group of Thirty, Derivatives: Practices and Principles, Washington, D.C., July 1993, Appendix A, page 49.

[168] Ibid, Appendix A, pages 48-49.

[169] New York Penal Law § 225.00 (McKinney 1989).

[170] New York General Business Law § 351 (McKinney 1988).

[171] New York General Obligations Law §§ 5-401, 5-411 (McKinney 1989).

[172] On January 14, 1993, the CFTC adopted two separate sets of regulations that exempt swap agreements (as defined in Section 101 of the U.S. Bankruptcy Code) and hybrid instruments (the regulations define "hybrid instrument" as an instrument that is an "equity or debt security or depository instrument...with one or more commodity-dependent components that have payment features similar to commodity futures or commodity option contracts or combinations thereof") from the Commodity Exchange Act (CEA). The regulations were adopted pursuant to the authority granted to the CFTC under the Futures Trading Practices Act of 1992 (FTPA) to provide exemptions from the CEA for futures contracts and transactions that may have futures-like elements, including swap agreements, hybrid instruments, forward contracts, and bank deposits. The FTPA also provides an express preemption of state "bucket shop" and gaming laws for transactions covered by the terms of the exemption. Therefore, the exemptions provide valuable legal certainty which should be sought in jurisdictions where the legality of derivative transactions remains an issue (these exemptions would not appear to apply to derivative transactions that are equity indexed.

[173] See Section G: Recent Congressional Action Regarding Financial Derivatives for further details.

Legal risks for the derivative markets are still significant despite progress toward establishing legal certainty. Banks have taken steps to limit potential legal risks by obtaining opinions of counsel that counterparties have legal authority to enter into contracts and by strengthening due diligence reviews of counterparties. Banks and other market participants also are working together through an industry trade group, the International Swaps and Derivatives Association (ISDA), to address common legal concerns. It is important to remember that because much of the derivative products markets is relatively young, many legal uncertainties exist regarding these instruments.

Legal uncertainty may be one of the greater risks currently encountered in the derivative markets. There appears to be a general complacency to questions of enforceabilities needed with regard to counterparties outside of the U.S. This brings to mind the conventional wisdom of the 1970s and early 1980s when it was said that "sovereigns do not default." The subsequent LDC debt crisis should serve as a warning when weighing the foreign legal risks that may exist related to derivatives.

7. AGGREGATION OR INTERCONNECTION RISK

Aggregation or interconnection risk results from the interaction of positions in one instrument with other positions, both in derivative products and in the underlying asset markets. These interactions frequently involve both cross-border and cross-market links and a wide range of individual financial instruments. Multi-legged derivative positions are growing rapidly, both in size, variety and complexity. Transactions can now involve different types of derivative instruments packaged into one product. Because of the increasing prevalence of these positions, a major default or disruption may not be isolated as easily as was once the case.

Interconnection risk can also be seen as one basic element in systematic risk: the risk that a disruption by any participant or group of participants causes widespread difficulties throughout financial markets. The growth of activity in derivative products along with the tendency for derivatives to strengthen the linkages between market segments has increased the possibility that disruptions or increased uncertainty in any market might, nevertheless, affect other markets more quickly now than in the past. The complexities and interdependencies inherently associated with multi-legged positions -- whether involving derivatives or not -- are such that the sudden failure of a major market participant might disrupt the financial system, especially if that failure were to occur in an already unsettled market environment. Section 308 of the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) addresses some of the concerns presented by interconnection risk. Notably, Section 308 of FDICIA, Interbank Liabilities, was inserted into the law[174] to limit the risks that the failure of a large depository institution (insured depository institution or not) would pose to correspondent insured depository institutions.[175]

Certain symptoms of the potential for such problems were evident in the circumstances of the stock market crash of 1987 and the bankruptcy of Drexel Burnham

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[174] Public Law 102-242, December 19, 1991.

[175] See Section G: Recent Congressional Action Regarding Financial Derivatives for a more detailed explanation of Section 308.

Lambert in early 1990.[176] In both situations, the problems were contained, but the containment efforts required considerable efforts on the part of the regulators and on the part of market participants.[177] Those episodes, as well as the continued rapid pace of change and innovation in financial markets, underscore the importance of ongoing efforts of the banking agencies to design prudent banking supervisory and payment system policies to limit the risks to individual banking organizations and systematic risks.

8. SYSTEMIC RISK

The rapid growth of global derivative transactions has led industry sources to question whether this activity might increase systemic risks in the financial markets or complicate the efforts of supervisors to deal with systemic disturbances.[178] A complete evaluation of the contribution of derivatives to the economy must consider these potential consequences and assess their likelihood and significance. Since some systemic risk arises in the course of ordinary market activities, it can never be completely eliminated.

Supervisory authorities,[179] who have studied the systemic issues posed by derivatives, have defined Systemic Risk and Systemic Crisis, two separate issues, respectively, as:

> "The risk that a disruption (at a firm, in a market segment, to a settlement system, etc.) causes widespread difficulties at other firms, in other market segments or in the financial system as a whole."

> "A disturbance that severely impairs the working of the financial system and, at the extreme, causes a complete breakdown in it. Systemic risks are those risks that have the potential to cause such a crisis. Systemic crises can originate in a variety of ways, but ultimately they will impair at least one of three key functions of the financial system: credit allocation, payments, and pricing of financial assets. A given financial disturbance may grow into a systemic crisis at one point in time but not another, depending on the financial and economic circumstances prevailing when the shock occurs."

a. Possible Sources of Systemic Risk

Most commentators, rather than asserting categorically that derivatives increase systemic risk, raise questions about the potential impact of these activities. The Promisel Report observes that derivative activities between banks has led to a substantial increase in the volume and complexity of exposures, thereby creating new challenges in risk

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[176] Also see responses to Question #12b posed to the SEC and CFTC by Representative Leach regarding Drexel.

[177] There is a variety of opinions on the degree to which systemic risks exist in the derivative markets.

[178] Also see responses to Question #21 posed to the regulators by Representative Leach.

[179] Report prepared by a Working Group established by the Central Banks of the Group of Ten countries, "Recent Developments in International Interbank Relations," (the Promisel Report) Bank for International Settlements, Basle, Switzerland, October 1992.

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management.

There is no general agreement as to which aspects of derivative activities pose the greatest systemic concerns. Relevant issues to systemic risk, according to industry experts and market participants are mostly the same risks related to derivatives. They include:

(1) The Size and Complexity of Derivative Activities

Derivative activities are clearly large, but still modest in size relative to activities in other markets. Its complexity, which is a reflection of the equally complex risks in the real economy, would merit concern if it outstripped participants' ability to evaluate and manage the attendant risks. There is much evidence to the contrary. Most dealers have gone to great lengths to establish sophisticated techniques to manage their derivative exposures with considerable precision; many are extending the benefits of these techniques.

(2) Concentration of Activity Among a Relatively Small Number of Institutions

The geographic diversity of dealers and the different types of institutions acting as dealers considerably reduce the level of concentration, both within countries and for a group of institutions (e.g., banks). A survey based on available data from annual reports of dealers indicates that the top eight dealers accounted for 58% of the interest rate and currency swap markets at year-end 1991.[180] No firm in that survey had over a 10% share of the market.

(3) Lack of Transparency

This is mentioned in the context of internal management reporting, external financial reporting, or the collection of industry data. As to the first aspect, many participants, especially dealers, mark their derivative positions to market for risk management purposes, an important step towards transparency. Financial reporting is one area where the institutional framework -- accounting standards and reporting requirements -- has not kept up with the development of derivatives. This is clearly an area where improvements are needed. Recommendations on the part of market participants call for voluntary adoption of accounting and disclosure practices for international harmonization and greater transparency, pending the arrival of international standards. This may be an area of particular interest to legislators. As for industry data, private industry organizations have contributed substantially, and continue to do so, to the base of information and consolidated data that exists on OTC derivatives.

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[180] Source: The World's Major Swap Dealers, Swaps Monitor Publications, Inc., November 1992.

(4) Illiquidity

The liquidity of derivative transactions has been successfully tested in several situations of failure by large participants. By moving from the management of individual positions to the management of components of market risk, derivative dealers appear to have been able to move beyond product liquidity to risk liquidity: a customized swap may appear to be illiquid, but if its component risks are liquid, then dealers will be willing to provide liquidity. Positions can become illiquid, however, particularly in a crisis.

(5) Settlement Risk

Relative to the settlement risk of foreign exchange transactions, which is very large given the volumes involved, the settlement risk of derivatives appears to be modest. Such risk is further reduced for settlements in a single currency, by the netting provisions that are standard in derivative contracts.

(6) Credit Risk

The amount of credit losses incurred in derivative activities has been very low. In fact, the rate of credit losses in derivatives compared with loss rates for traditional banking products indicates that by participating in derivative activities, bank dealers have increased the average credit quality and diversity of risk to which they are exposed.

(7) Unregulated Entities

Unregulated entities -- such as affiliates of U.S. broker-dealers or of insurance companies, and certain non-financial firms -- have prompted increased competition and innovation of products but could lead to increased risk to regulated dealers or increased systemic risk. Participants evaluate for themselves the risks and benefits of trading with unregulated entities.

(8) Market Linkages

Derivatives have increased market linkages by intermediating markets efficiently and by providing effective risk management tools to facilitate the operation of global businesses. At the same time, there is concern that by fostering these linkages, derivatives make it possible for shocks to be transmitted faster and farther than was possible before.

(9) Legal Risks

Despite efforts to reduce legal risks, they remain significant and have the potential to create systemic problems. Market participants and research indicates that derivatives appear to pose no significantly greater systemic threat than other financial

activities to the financial systems. However, industry experts indicate that there is no room for complacency. According to market participants,[181] systemic concerns can best be addressed through:

- Adherence to principles of good management practice;
- Reinforcement of the legal framework for the activity;
- Improved accounting and disclosure standards; and
- Cooperation between participants and official bodies towards a better understanding of the activity, its risk, and measures to mitigate them.

Despite these numerous possible sources of systemic risk, some say that derivative activities pose no significant threat of systemic risk. No one disputes that the above-mentioned threats exist; interpretation differs on how significant these threats actually are.

For example, representatives of the New York State Banking Board (NYSBB) assert that the possibility of a systemic crisis caused by derivative activities is simply not demonstrated by evidence. In supporting their argument, the NYSBB cited eight major market events[182] of recent years, none of which caused a failure in the financial system. Having said this, they further indicated that derivatives do not pose a systemic risk to the financial systems.

Among U.S. banks, it is widely accepted by experts in the field of derivatives that only a few large institutions appear to have material exposures arising from activity in the derivative products markets. Most of them are perceived by the market to present little credit risk and, in practice, they all have sophisticated risk management procedures and capital bases large enough to absorb sizable derivative product losses. In addition, the concentration of derivative activities in only a few large institutions facilitates supervision of their activities. The failure of one of these institutions as a result of derivative products appears unlikely in the current risk environment. These views are widely supported by independent organizations such as Moody's and Standard & Poor's, two well-established, and well-respected credit rating agencies whose functional purposes are to analyze and evaluate the viability of organizations.

For one view, the NYSBB directed our attention to the words of William F. Sharpe, from his December 1990 Nobel address: "In general, financial systems are self-correcting. Given time, participants learn to use new instruments and procedures...It is usually best to wait until the forces of competition are able to regulate a market rather than to impose regulations prematurely."

To present an alternative view on the topic of derivatives and systemic risk, Brian Quinn, Executive Director of the Bank of England, discussed this issue before the Group of Thirty on September 27, 1993, at the Federal Reserve in Washington, D.C. Mr. Quinn was less easily persuaded by the findings of the Group of Thirty on the subject of

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[181] Sources: Minority Staff discussions with dealers and end-users; Group of Thirty.

[182] For example: the stock market crash of 1987; the bankruptcy filing of The Drexel Burnham Lambert Group; the collapse of the Bank of New England; the collapse of the European Monetary System (EMS) Exchange Rate Mechanism on July 30, 1993, and the EMS currency chaos in September 1992.

systemic risk, and went so far as to say that the conclusions contained within the report may be somewhat complacent.

Mr. Quinn questioned the Report's partial justification that "experience so far, and related research, do not appear to throw up any serious problems." In his speech before the G30, Mr. Quinn emphasized the word so far, and indicated that this is not a good indicator or measure for future reference, particularly for a market which is growing so rapidly. Expanding on this latter point, Mr. Quinn noted that expertise in derivatives is limited. He added that if the demand for this new source of profit should expand more quickly than the supply of people capable of doing the business, there can only be trouble ahead. As a final point on this point, Mr. Quinn compared the derivative markets to the LDC (Lesser Developed Countries) loan crisis, where "..by the time the full dimensions of the problem became apparent, it was almost too late."

9. CREDIT RATING AGENCY ASSESSMENT OF DERIVATIVE RISKS

Credit rating agencies are particularly interested in the derivative activities of banks and securities firms because of the impact these derivatives have on the credit quality of the entities they rate. For example, since derivatives don't show up on balance sheets, and extensive standardized supplemental reports on these instruments have not yet been put into place, it is unclear exactly how, and to what extent, the credit quality and financial condition of firms is affected by derivative activities. This often leaves everyone from accountants to analysts, investors, and regulators guessing about the risks being taken by an institution.[183]

The Minority Staff held discussions with the two principal credit rating agencies, Moody's and Standard & Poor's, on the topic of derivatives and their impact on the credit quality of banks and securities firms.

a. Moody's Investors Service

The goal of Moody's analysis, where derivatives are concerned, is to form a subjective opinion about the effect derivatives have upon the credit quality of an entity they rate.[184] They look at derivatives in two principal contexts: 1) how derivatives are used to hedge against, for example, liabilities or foreign cash flows, and 2) how derivatives are used to assume speculative risks. Their focus in rating firms revolves around the degree to which firms use derivatives to hedge risks inherent in their business and the degree to which they use derivatives to speculate. In addition to rating companies, Moody's rates mutual funds -- here also, derivative use is examined in the context of hedging versus speculation.

Moody's does not have one particular set of ratios or mathematical formulas that can dictate an opinion. Rather, Moody's forms an opinion about an entity's appetite for risk and the systems they have in place to monitor, report, and control the risk of

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[183] "Banc One's McCoy Tries to Calm Fears over Heavy Use of Derivatives." American Banker, October 22, 1993.

[184] Lucas, Douglas, "Moody's Assessment of Derivative Risk," Moody's Special Comment, June 8, 1993.

derivatives at that entity. Moody's approach to analysis of derivative risk involves four main areas, as follows.

(1) **Overview**

The goal here is to understand the purpose of the entity's derivative activity. For example, are derivatives entered into to gain fee income from customer orders, or are they entered into to take market positions? Besides providing a large source of revenue, an entity's ability to service its customer's demand for derivative products is important in maintaining its franchise -- customers will shop where they can get the products and services they need.

Moody's has determined that financial institutions often use derivatives for more than one purpose, and similar institutions use derivatives in similar ways.[185] After understanding what the purpose of the derivative activity is, Moody's next determines how chosen derivative products fit into the purposes cited. Moody's is also interested in how the derivative "desk," or operational unit, fits into the institution's organization and reporting structure, and how reporting relationships aggregate across products and geographical locations. Another key consideration is whether back office support has kept up with front office staffing and increased usage of derivatives.

(2) **Market Risk**

After the overview, Moody's explores with management the valuation methods and market variables entities use to account for market risks. Estimation of how values can fluctuate with changes in market variables is a very difficult issue to pinpoint, and Moody's puts special emphasis on the factors used to make these estimations. Overall, Moody's examines whether the sophistication of an entity's analytical approach matches the depth of its involvement in the derivative markets and the complexity of its positions.

(3) **Credit Risk**

Analytical issues for credit risks are complicated by netting. The problem is one of both system capability and legal enforceability.

As a systems problem, one issue is how easily and quickly all transactions with a particular counterparty can be aggregated together into a single net credit exposure. The problem here is combining information from all of the bank's geographical locations and products desks on a counterparty by counterparty basis. Moody's has found that the collection of this data and the compiling of exposures can take an inordinate amount of time at some institutions.

The system procedures in place to net current or future derivative exposure must

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[185] For example, regional banks use derivatives to hedge risk as well as to assume certain risks. Certain money center banks and securities firms use derivatives for these two reasons, but also to earn a spread by servicing customer demand for derivatives.

also be justified on legal grounds. Since the legal certainty of netting varies by country, Moody's is interested in how these differences are addressed by market participants. Moody's is also concerned that an institution's own swap documentation supports netting.[186]

Moody's also explores the way credit limits are determined and the role of the credit officer. Moody's feels that a good credit culture is more apt to exist where the credit officer has the maximum amount of authority and autonomy.

Supporting documents that Moody's finds useful in their credit risk evaluation include the gross and net exposures to the most significant counterparties, aggregate gross and net exposures to counterparties by rating, and sample master agreements.

(4) Operating Risk

As part of Moody's evaluation of operating risk, they focus on accounting, compliance and controls, and also on the level of management's expertise and involvement in the entity's derivative business. All of these elements, often overshadowed by the importance of credit and market risks, are critical to the proper functioning of an entity, particularly where derivatives are concerned.

In concluding, Moody's points out that in the past, very few banks they rate have been materially affected by their derivative activities except in a positive way. They believe that it will be quite rare that derivative activity will threaten the credit quality of an institution and added that they do not think that derivatives are a ticking time bomb for the banking industry as a whole.

Moody's has never changed an institution's rating solely on the basis of its derivative activity. They feel that derivatives are usually used by financial institutions to produce income in ways that assume risks similar to the risks already undertaken by the financial institution in its other activities.

b. Standard & Poor's Corporation

Given that derivative instruments are new, that they have not been tested through a wide variety of stress scenarios, and that they can be very complicated in nature, Standard & Poor's (S&P) is concerned that there is potential for some unforeseen danger in these markets.[187] Fueling the above factors is the profitability contained within derivative instruments. U.S. money center banks have profited immensely from the development of the derivatives business over the last decade; banks now derive a substantial amount of their earnings from the business.

S&P recognizes that potential for increased risks always exists in new businesses, but after their current analysis of derivative activities of banks, they are not worried and

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[186] Moody's has been surprised by the large number of unsigned master agreements they have found at dealers.

[187] Azarchs, Tanya, "Banks Face Manageable Risks in Derivative Businesses," CreditWeek, Standard & Poor's, November 1992

do not anticipate problems at this time. The primary reason for this is that the risks inherent in derivatives are the same risks that banks have long dealt with in other basic lines of business, such as lending, treasury and trading operations. Derivative risks, in the opinion of S&P, appear to be quantifiable and manageable.

(1) Credit Risk

On the whole, S&P believes that credit risk is the largest but the most easily managed of the risks. Evaluating credit risk involves not only assessing the probability of a counterparty default, but also quantifying a maximum exposure to loss. Estimation precision for both on the part of market participants is critical to the proper functioning of the markets, and the viability of the organizations in question.

Estimation of the probability of counterparty default is undertaken following rigorous credit analysis and by requiring collateral requirements. Quantifying exposure to loss is much more difficult. Dealers typically model the potential increase in value of derivative contracts by employing statistical methods or simulation techniques to estimate the volatility of the underlying financial instrument, and how the volatility will affect the price of the contracts. S&P noted that there is a great difference in the quality of the risk models. In general, S&P believes that models and systems capabilities are in a "catch-up" mode, and have experienced difficulty keeping up with the growth of the business. However, S&P believes that it is possible for banks to quantify the amount of credit exposure they assume within reasonable parameters of accuracy. Further, although S&P believes that credit risks associated with derivative activities are substantial, they are proportionately less than the risk taken in on-balance sheet lending.

S&P has its own method of calculating maximum potential market value (MPMV) -- its version of quantifying maximum credit exposure. The MPMV is calculated by multiplying the notional amounts of the product types by certain percentage factors.[188] The percentage factors increase with the assessed riskiness or volatility of the products, and are subject to reassessment periodically.

(2) Market Risk

The key to the degree of market risk, according to S&P, is management policy. Given that the tools exist to hedge,[189] management discretions as well as policies that identify and place limits on risk taking, are the determinants of the degree of market risk. S&P noted that another important element for market risk is management information systems that can present a comprehensive global picture of positions.

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[188] Commodity/equity contracts (15%); currency swaps (10%); currency options (4.0%); currency futures/forwards (3.0%); interest rate swaps (2.5%); interest rate options (2.0%); interest rate futures/forwards (0.3%).

[189] The potential impact of imperfectly hedged positions is very large. According to S&P, however, the major dealers appear to practice good risk management with very little intentional position taking. Evidence of this is that revenues from derivatives have been relatively stable.

(3) Capital

The derivatives business has grown to be a substantial user of capital at the major dealers. They are a larger user of capital, in S&P's estimation, than it generally is in management's eyes. Most of the capital allocated by bank managements covers credit risks, with generally a small concession for market risk. S&P believes that for derivatives, just as for lending, substantial additional capital is needed to cover risks other than the most probable credit loss level.

S&P believes that market risk could be much higher, especially in periods of market disruption or sudden deviations from historic rate levels. Legal risks, such as the enforceability of contracts, are also significant. Taken together, these risks are substantial, and S&P noted that they require appropriate levels of capital. S&P believes that continued vigilance is needed to ensure that the risks associated with derivatives remain adequately supported by capital.

In concluding, S&P noted that to improve the system, continued vigilance is needed. They added that improved monitoring systems and public disclosures to increase the transparency of the business are also critical.

C. SUITABILITY

Suitability rules are guidelines that those selling sophisticated and potentially risky financial products, such as financial derivatives, must follow to ensure that investors have the financial means, information, knowledge and awareness to assume the risks involved. Such rules are enforced by various regulatory agencies and through self-regulation on the part of entities selling these financial products.

The rules generally require that the investor in the financial product have 1) a certain level of net worth[190] and liquid assets,[191] so that he or she will not be irreparably harmed if the investment loses value, and 2) a certain level of knowledge about the financial product(s) in question, and a sufficient degree of awareness of the purposes and risks associated with the financial product(s). Entities may, and have been, sued for allowing an investor to purchase an unsuitable investment. The penalties are often high, and repercussions can be severe on the part of investors, in the form of lawsuits and word of mouth, if they perceive a firm to be a seller of unsuitable products.

Suitability is an important issue for the financial derivative markets given the magnitude and complexity of the markets, and the low level of understanding and misconceptions of the instruments used in these markets. Despite the above constraints, derivatives are held in numerous pension and mutual funds, and insurance company portfolios, investment vehicles conceived to protect assets and provide for future expenses. Ironically, pensioners and investors in mutual funds occasionally don't understand what derivatives are, how they function, or what the risks associated with such products are. There are several cases of investors losing their principal, and often a good portion of their savings or net worth,[192] due to unsuitable investments in financial derivatives or in products with derivatives embedded in them.[193]

Derivatives were once only used by sophisticated financial firms. Today, however, derivatives are commonplace in the investment world, and many investors are far more involved than they realize.[194] For example, the 250,000 shareholders in the Fidelity Asset Manager fund collectively own $518 million of derivatives, or 8.5% of the fund's assets. The Strong Government Securities fund at the end of 1992 had 8% of its $82 million of assets in a single holding of currency-linked derivatives: bonds issued by the Federal National Mortgage Association that bet on the difference in exchange rates between the Spanish peseta and the Swiss franc. Futures, options and other derivative

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[190] Net worth is defined as the amount by which assets exceed liabilities.

[191] A liquid asset is any asset that is readily convertible to cash. Liquid assets are generally defined as cash or its equivalents.

[192] It is important to note that similar circumstances have befallen investors using other financial products, and that such cases have occurred with much greater frequency than for investors using derivatives.

[193] A recent case in Ohio demonstrates this well. Recent audits have disclosed that local governments in Ohio lost heavily by investing in "interest-only strips," (IOs) a derivative of mortgage securities which entitle the investor to receive a stream only of interest payments from the underlying mortgages. Ohio's Attorney General determined, in October 1993, that mortgage-backed securities issued by Fannie Mae were unsuitable investments for the operating funds of many municipalities and school districts. The Ohio state auditor is expected to ask the state Attorney General to declare that investments in IOs are illegal under Ohio's current investment guidelines. See "Ohio Case Signals Backlash Against Exotic Mortgages," Washington Post, November 1, 1993.

[194] Wall Street Journal, August 10, 1993.

positions amount to 35% to 45% of Pacific Investment Management Company's flagship $3.4 billion Total Return mutual fund -- and that is not counting the 20% in mortgage-security derivatives.[195]

Even sophisticated investors, whose professional purpose is to manage and oversee financial products, can get trapped. Several years ago, Merrill Lynch & Co. lost $250 million in trading related to mortgage securities. In the first two months of 1993, Salomon Inc. lost $250 million, understood to be mainly in mortgage derivatives. Also this year, Showa Shell Sekiyu K.K., a Japanese oil company, admitted to losing some $1.59 billion from trading currency derivatives.[196]

Such examples highlight the controversy surrounding derivative products. There clearly are trappings involved in using these financial products, partly because derivative don't show up on bank balance sheets, and standardized supplemental reports have not yet been put into place. That leaves everyone from accountants to analysts, investors, and regulators guessing about the risks being taken by an institution. According to Richard Lodge, Chief Investment Officer of Banc One Corporation, "Investors hear the word derivatives and think we must be rolling the dice, shooting up, and taking big risks."[197]

It should be noted, however, that in many respects, derivatives are perfectly suitable instruments used to hedge against financial risks, and they can be very good for investors. Derivatives give money managers enormous flexibility in mixing and matching features of stocks, bonds, currencies, commodities and other assets. Derivatives can also reduce the cost of administering a portfolio and enable managers to buy and sell big positions without distorting prices. In addition, they enable managers to increase or scale back their portfolios' risk exposure in unprecedented ways.[198]

A primary issue related to such complex financial transactions is not whether investors, pension funds, mutual funds, insurance companies or other market participants should be allowed to enter into or take part in derivatives, but whether certain instruments are suitable for certain investors. Mutual funds are now increasingly changing their prospectus' to allow the use of certain derivatives in their funds management and risk-hedging. All concerned parties, from the dealer down to the small investor, are concerned about suitability issues facing them and it is in nobody's interest to have suitability problems arise.

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[195] Ibid, all examples.

[196] Ibid, all examples.

[197] American Banker, October 22, 1993.

[198] Wall Street Journal, August 10, 1993.

1. VIEWS ON SUITABILITY FROM THE REGULATORY COMMUNITY

There is consensus among regulators[199] that the Commodity Futures Trading Act and CFTC regulatory controls currently in place are adequate for protecting unsophisticated end-users of exchange-traded derivatives. For example, the NYSBB noted that regulations of the SEC require that any potential trader of securities options be provided with a booklet entitled "Characteristics and Risks of Standardized options." The OCC indicated that Futures Commission Merchants (FCMs) are required to deliver to their customers risk disclosure statements with respect to futures and, where applicable, options. The OCC believes that the disclosures currently in place appear to provide adequate information concerning the risks inherent in these [exchange] markets. The CFTC noted that customers buying or selling exchange-traded futures and options contracts under the Commission's jurisdiction are covered by the anti-fraud and other customer protection provisions of the CEA as well as comprehensive CFTC regulations which require Futures Commission Merchants (FCMs) to abide by certain rules and regulations. The CFTC also carries an active enforcement program to enforce the provisions of the CEA and the commission's own regulations.

There are fewer supervisory measures in place for the OTC markets. The FDIC noted, however, that although Recommendation 20 of the G30 Report (Disclosures) discusses the need for disclosing substantive information regarding the use of derivatives by dealer institutions, it does not suggest a format or circumstances under which these disclosures should be made.[200] Consequently, there is no provision in the Report for having dealer institutions provide substantive disclosure of the risks of derivatives to end-users. The FDIC is particularly concerned about this given that they regulate state non-member banks, which tend to be users, and in some cases unsophisticated users, of derivatives. The FDIC stated that absence of disclosure information presents significant examination and enforcement difficulties when derivatives are encountered. Finally, the FDIC noted that the absence of disclosures by the primary dealer may result in significant hidden risks, and make these instruments unsuitable for various end-users. A reason for "sidestepping" the issue, the FDIC proffered, was that "this issue would result in a significant departure from present practice by the financial services industry dealers in derivative products, and further would impose an actual implementation cost."

On the other hand, the SEC noted that most derivative trading occurs among financial and other institutions that, generally, have the bargaining power to obtain necessary information to evaluate investment strategies. The SEC added, however, that the Commission will not hesitate to enforce the anti-fraud provisions of the federal securities laws and customer protection rules to ensure that broker-dealers refrain from recommending unsuitable products to uninformed investors. Regulators reported that the following current measures address suitability concerns for participants in the OTC markets:

- The exemption from the Commodities Exchange Act (CEA) provided by the

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[199] Office of the Comptroller of the Currency (OCC); Federal Deposit Insurance Corporation (FDIC); Office of Thrift Supervision (OTS); Federal Reserve Board (FED); Securities and Exchange Commission (SEC); New York State Banking Board (NYSBB); and Commodity Futures Trading Commission (CFTC). See responses to Question #15 posed to the regulators by Representative Leach.

[200] Source: Federal Deposit Insurance Corporation.

CFTC for swaps and related OTC derivatives[201] covers only transactions entered into between "eligible swap participants,"[202] which generally are limited to commercial and financial entities and other participants that are considered to have relatively high levels of financial expertise.[203] Given this, a certain level of sophistication is required simply to participate in these markets. This is a strong measure to protect unsophisticated investors (by keeping them **out** of the market).

- Regulations currently in place require that entities dealing in financial derivatives have policies and procedures in place to monitor the financial strength of their clients to ensure that they can bear the consequences of adverse market movements. Rules prohibit firms from recommending to customers transactions unless the firm has reasonable grounds to believe that the recommended transaction is not unsuitable for the customer on the basis of information furnished after reasonable inquiry concerning the customer's investment objectives.

- The regulatory agencies and other official bodies monitor the behavior of dealers and market participants to reduce the potential for fraud and misrepresentation.

- Each counterparty to a swap or similar transaction in the OTC market is exposed to the credit risk of its counterparty over the entire term of the swap. Unlike trading markets, such as the securities markets, where buyers and sellers have no continuing exposure after settlement of a transaction, a participant in a swap or similar transaction has a continuing exposure to the non-performance of its counterparty for the duration of the contract.[204] This exposure provides dealers and other swap participants with a strong incentive to satisfy themselves that their counterparties are sufficiently able to handle the risks associated with the derivative transactions in which they are engaged, particularly where lines are established to cover multiple transactions.[205]

The OCC offered several suggestions as to how to provide increased protection to end-users of derivatives:

- Regulators of securities firms and financial institutions marketing derivative products should insist upon high ethical standards in the sales practices of derivative units.

- Market participants should encourage any actions which serve to improve the understanding of derivatives by potential end-users. For example, industry surveys,

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[201] See **Section G: Recent Congressional Action Regarding Financial Derivatives** for further details.

[202] "Eligible swap participants" are defined by the CFTC to include: depository institutions, trust companies, insurance companies, investment companies, commodity pools, corporations and other business organizations that have total assets exceeding $10 million or that meet certain other criteria, employee benefit plans with assets of at least $5 million or the investments of which are managed by certain regulated entities, governmental entities, broker-dealers, futures commission merchants and floor brokers and traders, or natural persons with total assets exceeding $10 million. [See 12 CFR 35.1(b)(2) (as added by 58 FR 5587 (January 22, 1993)].

[203] Response from the Federal Reserve Board.

[204] While both parties to a swap have exposure to one another, the risks associated with option contracts are asymmetrical. The buyer of an option is exposed to the risk of non-performance by its counterparty until expiration or exercise of the option, but the seller of the option has no exposure to the buyer once the option premium has been paid.

[205] Response from the Federal Reserve Board.

studies, seminars etc... are beneficial.

• Market leaders should continue efforts to develop standardized legal documentation for derivative transactions.

• Credit officers responsible for establishing and changing financial derivative credit lines should understand the applicability of financial derivative instruments to the risks the customer is attempting to manage. When a financial institution believes a particular transaction may not be appropriate for a particular customer, but the customer wishes to proceed, management should document its own analysis and the information provided to the customer.[206]

The Federal Reserve noted, however, that "past experience does not appear to justify additional protective measures for end-users." They added that suitability rules may be difficult to develop. To support their argument, the FED explained that end-users of derivative products cover an extremely broad spectrum, and the level of sophistication of an end-user with respect to derivative instruments is not necessarily related to size, net worth, or nature of the organization. The FED noted that some end-users engage in a very limited number of transactions tailored to cover particular exposures or in connection with specific transactions. Other end-users with greater experience and more complex sources of exposure may use OTC derivative products much more actively in their overall risk management. Given the broad range of entities that can legitimately benefi: from the use of derivative instruments, it would be difficult to develop standards to protect unsophisticated parties that would not also inhibit their efforts to reduce risks.[207]

The FED did add, however, that "while further protective measures do not appear to be necessary in the current [OTC] market, as the OTC markets expand it may be appropriate to consider other measures to assure that end-users are aware of the risks of the transactions they enter into." The FDIC also noted that "prohibitions on the use of certain forms of derivatives may effectively limit certain credit or market risks."

General consensus among the regulators to alleviate suitability problems in the OTC financial derivative markets was to increase levels of education and knowledge, and to provide appropriate disclosure.

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[206] "Risk Management of Financial Derivatives," Banking Circular (BC-277), Office of the Comptroller of the Currency (OCC), October 27, 1993.

[207] This difficulty is reflected in the experience of the CFTC with users of exchange-traded derivatives. The CFTC withdrew its proposal for a "suitability" standard for application to users of futures contracts, indicating that it had not been able to develop "meaningful standards of universal application" at that time. 43 FR 31886,31888 (July 24, 1978). The National Futures Association (NFA) also attempted to formulate a "suitability" standard, but ultimately adopted a "know-your-customer" rule in combination with disclosure requirements. The NFA "know-your-customer" rule applies only to customers that are individuals, and requires relatively limited information compared with that generally required by a counterparty in a derivative transaction.

D. CLEARINGHOUSE PROPOSALS AND RELATED INFORMATION FOR THE SWAPS MARKETS

An issue facing the derivative markets is whether a clearinghouse mechanism should be created for OTC derivatives. Properly defined, a clearinghouse arrangement is a mechanism for calculation of mutual positions within a group of participants with a view to facilitating the settlement of their mutual obligations on a net basis. While establishment of some form of properly structured clearinghouse[208] arrangement for the swaps markets[209] is more or less desirable on the part of dealers, end-users and regulators, the notion of establishing a traditional clearinghouse mechanism has met with considerable criticism. Parting from the other regulators, the SEC suggested that the establishment of one or more clearinghouses that specialize in the processing of trades in swaps may improve the current regulatory framework for the swaps market by helping to ensure the legal certainty of swaps transactions and by improving settlement efficiency through payment netting. The SEC stated that while there are regulatory issues involved in the establishment of a swaps clearinghouse, regulators should actively evaluate the development of such facilities.

The idea of an exchange market style clearinghouse for OTC derivatives gained prominence early this year, in part because the U.S. Government had just exempted swaps from U.S. commodity regulations.[210] However, large dealers who account for 80% of the world's swap trades sidestepped the issue, knowing that without their participation, a swaps clearinghouse would not be successful. Given this constraint, proponents for the clearinghouse model quieted down; instead, consensus appears to be building for some type of third-party service to perform traditional clearinghouse functions.

This section will describe and analyze the clearinghouse system currently in place for the exchange markets, different proposals for establishing a clearinghouse mechanism for the swaps markets, and the views of various dealers, end-users, and regulatory entities who shared their insights on the subject with the Minority Staff. Listed at the end of the description of proposals for clearinghouse offset are the primary benefits and drawbacks of a clearinghouse system with discussion evaluating and analyzing the pros and cons of clearinghouse offset.

1. CURRENT EXCHANGE MARKET CLEARINGHOUSE SYSTEM

Currently, only the exchange markets have a clearinghouse mechanism in place. This mechanism performs such functions as position or contract valuation on a daily basis, and calling, receiving and posting of margin, or collateral requirements. Positions in exchange markets are always matched; the clearinghouse serves to bring

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[208] A clearinghouse arrangement is a mechanism for calculation of mutual positions within a group of participants with a view to facilitating the settlement of their mutual obligations on a net basis.

[209] Clearinghouse proposals discussed in this Report are those directed primarily at the swaps markets. Market participants indicated that a properly designed clearinghouse proposal for the swaps markets could eventually extend to other OTC derivative instruments.

[210] Source: The Financial Times, October 20, 1993.

counterparties together, to match their needs, and to provide transactional and other technical services.

Only standardized contracts with predetermined purposes are traded on exchange markets. The clearinghouse seems to function well in these markets primarily due to this standardization feature. Market participants in the organized exchanges have predetermined needs, and are aware of the instruments available to fulfill those needs; the clearinghouse functions to bring parties with mutual needs together.

In the current exchange markets, the counterparty or the exchange itself is always the clearinghouse. The customer is not concerned with who the opposite side of the agreement is, and doesn't bother with technical aspects of an agreement such as margin, payment or settlement. The primary purpose of clearinghouse is to prevent participants from having to ascertain and verify the creditworthiness of their counterparties. For each and every transaction in the exchange markets, there is a mechanism which assures participants that the "other side" of the transaction has an ability to pay, or deliver on the terms and conditions contained within the agreement. The exchange markets have flourished partly as a result of this security, and they continue to remain active.

2. BASLE COMMITTEE CLEARING PROPOSAL

Multilateral Netting: Possible Approach for Supervisory Treatment at Some Future Date

The BIS clearing proposal is designed to extend the benefits of netting to cover contracts which originate with any of a group of counterparties that participate in the netting arrangement, instead of with just a single counterparty as in bilateral netting. Commonly referred to as multilateral netting, full clearinghouse offset is designed to extend the benefits of netting[211] to cover contracts which originate with any of a group of counterparties that participate in the netting arrangement, instead of with just a single counterparty as in bilateral netting.[212] This can be achieved in practice by netting all transactions that originate bilaterally through a central counterparty -- a clearinghouse.

The result of this netting will be that for every eligible transaction agreed upon by a pair of members, the clearinghouse would be interposed as the common legal counterparty to each member, and the members would have no obligations towards each other under the deal. This is similar to the clearinghouse system currently in place for the exchange markets. In the Basle Committee proposal, for each member of the clearinghouse, multiple transactions that originate with many counterparties can be amalgamated and netted. As a result, exposures would generally be a fraction of those

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[211] Netting is defined as a written bilateral contract between two parties or more under which any obligation to each other to deliver securities, currency, or other assets on a given date is automatically amalgamated with all other obligations for the same asset, as of the same value date, in effect legally substituting one single net amount for the previous gross obligations. Netting is usually carried out as netting by novation (substitution of a new contract or obligation for an existing one, and the discharge of the existing obligation), in which existing obligations are rolled into a new master agreement for settlement of transactions.

[212] Federal Reserve Board, "Consultative Papers on Market Risk and bank Capital," Basle Committee on Banking Supervision, Washington, D.C., April 30, 1993.

that would arise in a non-netting environment.

If a clearinghouse member defaults, the clearinghouse would have to replace the cash flows that the defaulting member's portfolio would have produced. In the event of a claim on the defaulter, clearinghouse members would have to cover the shortfall since the clearinghouse may have very limited resources of its own.[213] This is also similar to the exchange market clearinghouse system.

Losses, according to the proposal, could be recovered from the membership in different ways. In a "defaulter-pays" (or centralized) clearinghouse, each member would be obliged to post collateral equal to its own net debit with the clearinghouse. In the event of a member's default, the clearinghouse would seize the defaulting member's collateral to cover the amount in default. In a "survivors-pay" (or decentralized) clearinghouse, a loss allocation rule would apply to the non-defaulting, surviving members. For example, losses could be allocated in proportion to a measure of the surviving members' bilateral relationship to the defaulting member. In practice, however, multilateral netting schemes could be a hybrid of these models. That is, members would be obliged to reimburse the clearinghouse for losses according to a predetermined loss allocation rule, but losses to be allocated to survivors would be reduced in the first instance by collateral posted by the defaulting member.

The proposal suggests that multilateral netting arrangements will be expected to have, among other things, safeguards to address settlement risk in a responsible manner, including risk controls such as internal limits, adequate and reliable liquidity support, and appropriate technical back-up facilities. The adherence of multilateral schemes to the six standards set forth by the Lamfalussy Report (**Appendix D**), will be monitored by central banks and other relevant authorities. However, each national supervisor whose banks belong to a multilateral netting arrangement should be satisfied that the standards are met before extending supervisory recognition to the netting performed under the scheme.

a. Capital Requirements Under Multilateral Netting

(1) Capital Requirements for Current Exposure

Under any multilateral netting arrangement, there must be an agreed formula whereby any losses suffered by the clearinghouse from the default of any of the members would be allocated to other members, even if the possibility of loss for the clearinghouse is remote as a result of comprehensive collateral arrangements. If a member's default (or close-out) caused a replacement loss to the clearinghouse, a bank would be allocated a loss share in proportion to its notional bilateral exposure to the defaulting (or closed-out) member. If the clearinghouse requires collateral, the loss to be allocated would be the residual loss (the amount by which the replacement loss exceeded the value of the collateral).

A starting point would be to regard a bank's current exposure as the sum of the

[213] Issues of systemic risk and concentration appear to be of consequence under this proposal.

loss shares that it would be allocated in the event of the default (or close-out) of each clearinghouse member to which it had a notional bilateral exposure, after factoring in the use of collateral available to the clearinghouse.[214] The sum of the loss shares provides an analogous treatment with non-netted contracts. In the case of non-netted contracts, the exposure is the sum of the exposure to the potential default of each counterparty. Of course, the effect of multilateral netting will tend to lower this exposure.

At this time, the Basle Committee has not reached conclusions about the level of capital requirements that should be attached to this measure of current exposure. This question will be kept under review in light of the continuing development of the multilateral foreign exchange netting initiatives and their oversight by central banks and other relevant authorities.

(2) Capital Requirements for Potential Future Exposure

The capital requirements under consideration by the Committee would also require a charge for potential future exposure. However, potential future exposure for a member of a multilateral netting facility would be determined by a combination of the evolution of underlying rates and prices, the changing pattern of clearinghouse exposure to other members, and the loss allocation procedure in place. A highly simplified approximation will be required to determine the add-ons needed to cover the resulting exposure.

b. Risk Weights for the Clearinghouse

Banks will have exposure to the clearinghouse for example through funding and liquidity back-up, to which a risk weight would need to be applied. Consistent with the Accord, the weight applicable to claims on a clearinghouse would be the normal 100% private-sector weighting, unless the clearinghouse is incorporated as a bank and becomes subject to bank supervisors' rules, in which case a 20% weight would be appropriate, or the host government or central bank has given a clear and unequivocal guarantee for all of its obligations, in which case a zero weight would be justified.

3. COLLATERAL SETTLEMENT PROPOSAL

The collateral settlement proposal is one where a third party entity would collect and manage collateral for derivative transactions. While satisfying numerous aspects of a full clearinghouse arrangement, this proposal would not impose a "middleman" as in the exchange market clearinghouse system. The third entity, not party to the transaction, would be established to perform certain technical functions such as trade matching, contract valuation, and receiving and posting of collateral requirements.

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[214] In the case of a clearinghouse that on a daily basis marks all outstanding contracts to market and collects from its members daily losses and pays out to its members daily gains (i.e., collects and pays variation margin), the capital treatment would be consistent with that of exchange-traded instruments - specifically, no capital would be required.

This proposal would allow control of collateral and credit exposure in an organized and efficient manner. The primary positive aspect of clearinghouse offset, the reduction of credit exposure, would be provided under this proposal, as the third party agent would independently collect collateral for each transaction; the risk of default is secured, unlike the unsecured risk found in the exchange market clearinghouse system where the exchange has some responsibility to members. At the same time, some of the negative aspects of imposing a full clearinghouse system are spared. For example, the custom-tailoring provision found in OTC markets, and in swap transactions, would still be available to participants, allowing them to construct and mold agreements as they see fit to accommodate their needs.

The collateral settlement proposal requires posting of collateral on a net rather than on a gross basis, i.e., positions are examined with respect to all members collectively rather than for each member individually. Collateral arrangements would be intended to work on a daily posting method; depending on the mark-to-market, collateral would need to be posted or credited at the conclusion of daily business.

This proposal differs principally in that the counterparty is still the opposite side of the contract, not the clearinghouse or exchange. The derivative agreement would only stand between the two counterparties entering into the transaction. Payment systems would remain the same as well. Provisions affecting collateral arrangements are what principally differentiate this proposal from the traditional clearinghouse model found in the exchange markets. This proposal would also relieve the third party entity from any liability in the case of counterparty default by not requiring them to bear any financial burden. Consequently, issues of systemic risk and concentration, so important to regulators and market participants, would not apply under this proposal.

The collateral settlement proposal was floated in late 1991/early 1992, but has not been implemented to date. The main reason for this, market participants indicate, is the lack of a definite need for such a system, or any clearinghouse system, in the swaps markets. There are no active discussions at this time on implementing this proposal. Some have suggested, however, that implementation of this or a similarly structured plan, will likely take place in the next two to three years.

Although implementation of a full-blown clearinghouse system for the swaps markets appears very unlikely, end-users, dealers and regulators generally agree that some form of mild clearinghouse arrangement, such as this collateral settlement proposal or a similar system used by Bankers Trust,[215] will eventually be necessary. Whether such action will take the form of the collateral agency proposal or some other format is unclear. What is certain is that the dealer, end-user, and regulatory community will not be the ones to "push" for implementation of a clearinghouse system. Rather, lobbying for such a proposal would likely come from "small," or "low volume" players in these markets, whose numbers may swell[216] as a clearinghouse would provide an opportunity for them to enter the market. A push for implementation may also come from the

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[215] Bankers Trust uses a system called C-Trac+, which offers third-party processing for all types of collateralized OTC transactions.

[216] There are pros and cons to having more people enter the market. The principal benefits include increased competition and diffusion of power (reduction in the "eliteness" of participants). The principal drawbacks include an increased likelihood for abuse in the market resulting from use of derivatives by unsophisticated investors, and looser internal controls, which is perhaps the key element to successful functioning of this market.

Chicago Board of Trade, where implementation of a clearinghouse mechanism for the swaps markets would dramatically expand the scope of the CBOT.

4. PRIMARY BENEFITS AND DRAWBACKS OF A CLEARINGHOUSE SYSTEM

a. Primary Benefits

- Reduction/elimination of counterparty credit risk;
- Daily position/contract valuation;
- Calling, receiving and posting of collateral requirements;
- Execution of technical and administrative considerations, including data collection and trade matching;
- Provision of liquidity to the corresponding market;
- Allowance for greater participation in the markets by smaller firms; and
- Industry-wide trade confirmation policy.

b. Primary Drawbacks

- Loss of flexibility in designing derivative contracts;
- Allowance for numerous entities to participate in the markets, some of which may not be suitably qualified; and
- A clearinghouse arrangement could expose dealers to unquantified, and potentially large, failure risk (systemic risk issues).

Although there are benefits and drawbacks in a clearinghouse mechanism, prevailing opinion among market participants appears to be that a clearinghouse arrangement only serves specific purposes and should not be implemented, as currently structured for the swaps markets.

Dealers, end-users and regulators all seem to agree that some form of clearinghouse may be necessary for the swaps markets in the future, as part of the evolution of the markets. Market participants suggested that such an arrangement may take the form of the collateral settlement proposal mentioned above. However, experts and the large majority of industry players agree that implementation of a clearinghouse mechanism to the swaps markets as it is currently structured for the exchange markets would be detrimental.

Opponents to implementation of an exchange clearinghouse system in the swaps

markets argue that the very purpose of the these markets would be nullified if a full-scale clearinghouse were implemented. The very nature of swaps contracts requires that it be permissible to craft and custom-tailor the agreements to suit the particular needs of those who use them. Imposition of a clearinghouse mechanism on the swaps markets may serve to eliminate the very purpose of these markets. Custom-tailoring allows swaps markets participants to mutually accomplish their goals with counterparties. The custom-tailor feature extends to both parties in a transaction -- there is mutual agreement on the terms and conditions of the contract before it is signed and both parties will service their needs and benefit from the arrangement. The flexibility in swaps contracts is critical to serving customers who require that agreements be custom-tailored to meet their specific needs. Such contracts are constructed from the "bottom-up," i.e., customers' requirements are first analyzed, then used as the basis for the terms of the contract. The final product is an agreement which suits all concerned parties. Should a clearinghouse arrangement similar to the one found in exchange markets be implemented in the swaps markets, customers would simply move their business offshore, originating agreements in other countries not subject to an OTC clearinghouse system. Market participants and industry experts correctly point out that implementation of a full clearinghouse system would take away measures for entities to reduce and control risks.

Opponents also argue that a clearinghouse arrangement would unfairly burden member participants by making them responsible for counterparties that default or don't owe up to their contractual obligations. Important systemic issues arise here. Subjecting dealers to concentration and opening the potential for systemic risk, in addition to the financial burden they would have to assume in the case of a member default, far outweighs the benefits provided by clearinghouse. Many of these benefits are already accounted for in dealers' current risk management measures. Although market participants and industry experts agree that the failure of one firm is unlikely to create systemic risk, member firms could potentially suffer dramatic losses. The implementation of a clearinghouse concentrates risks on an exchange; such concentration exposes all members to the risk that the clearinghouse itself may fail.

In addition, market participants opposed to implementation of a clearinghouse arrangement for the swaps markets state that their proprietary controls, supervision and technical measures account for the benefits found in exchange market clearinghouse. For example, by analyzing the credit quality of counterparties, by requiring collateral and by using relatively simple contracts with short durations, OTC dealers and end-users indicate that they can properly measure and control credit risk. In terms of contract valuation, most dealers mark-to-market on a daily basis and have sophisticated models to accurately reflect position values. Calling, receiving and posting of collateral in the OTC markets today is efficient and relatively simple, and back offices have been modified and upgraded to execute technical and administrative considerations. Furthermore, it is widely accepted among market participants that the lack of clearinghouse offset in OTC markets does not hamper liquidity in those markets. Dealers also argue against the burdens that would be imposed on them should a member firm default under a clearinghouse arrangement. Adversaries to the plan argue that such responsibility should be the placed on the counterparties themselves. Finally, OTC dealers and end-users argue that allowing greater participation in the markets by smaller firms is actually detrimental to properly supervising and controlling an already complex system and group of participants.

5. THE REGULATORY COMMUNITY

There is considerable opinion among regulators[217] that while clearinghouse arrangements have some merits, they should not be implemented in the swaps markets at this time.[218] Regulators quantified this general conclusion by saying that a properly designed and properly implemented clearinghouse system could well serve the OTC markets, and it may make sense to consider such a proposal in the future. The Securities and Exchange Commission was more positive on how effective a clearinghouse mechanism for the swaps markets would be, indicating that "...clearinghouses provide dealers and end-users with operational efficiencies that can result in savings to dealers whether or not they are direct participants in the clearinghouse. Such cost savings could be passed on to end-users. Moreover, the competition created by expanding the market to include more dealers should benefit end-users through lower transaction charges, and because the increased liquidity of the market should help ensure that end-users receive best execution." The SEC qualifies their remarks by noting that "...many details need to be worked out before an effective clearinghouse offset mechanism could be established. For example, because swaps typically are highly customized, low volume instruments, there may be limited opportunities for offset."

In their written responses, regulators cited several benefits associated with clearinghouse offset, all of which were covered in our meetings with industry experts and market participants. Included among them were:

- Allows greater participation/provides increased competition;
- Increased liquidity for the market;
- Potential lowering of overall costs to operate in the markets;
- Reduction of counterparty credit risks;
- Guaranteed settlement;
- Improved data collection and trade matching;
- Standardization of back-office systems, leading to further operational cost savings; and
- Facilitation of prompt closing of a failed participant's positions.

Despite these benefits, the regulatory community feels that drawbacks associated with clearinghouse implementation and potential systemic issues outweigh the advantages. The FDIC stated that "clearinghouse offset is practical only with the use of standardized contracts, and that the loss of flexibility [associated with clearinghouse offset] would outweigh any benefits." The FDIC added that OTC swaps [as they are currently structured] can provide more precise hedging and risk management vehicles.

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[217] Those surveyed include the New York State Banking Board, the Federal Deposit Insurance Corporation (FDIC), the Office of Thrift Supervision (OTS), the Board of Governors of the Federal Reserve System (FED), the Office of the Comptroller of the Currency (OCC), the Securities and Exchange Commission (SEC), and the Commodity Futures Trading Commission (CFTC). See responses to Question #14 posed to the regulators by Representative Leach.

[218] The CFTC issued an order generally exempting swaps from regulation under the CEA on January 14, 1993 (58 FR 5587, January 22, 1993). In that order, the CFTC noted that it believed a clearinghouse system for swap agreements could be beneficial. However, because clearing mechanisms were not yet in existence and since they may take many forms and raise different concerns due to varying forms and participants, the CFTC did not include clearing in its exemptive order. The CFTC did, however, explicitly state that it would consider further exemptive relief and that it would evaluate the terms and conditions of clearing systems that market participants wish to use.

The OTS indicated that "some types of swaps could be run through a clearinghouse mechanism, but there is still a large segment [of the swap market] for which a clearinghouse would be an inefficient solution."

By far the most important concern on the part of regulators was the issue of systemic risk.[219] The FDIC was of the opinion that "a clearinghouse mechanism could potentially expose dealers to unquantified, and possibly very large, failure risk of a member dealer, unless the clearinghouse itself was substantially capitalized." The Federal Reserve added that "multilateral netting through a clearinghouse may obscure the level of exposures instead of achieving reductions in actual credit and liquidity exposures...multilateral netting systems can shift and concentrate risks in ways that could increase systemic risk by increasing the likelihood that one institution's failure will undermine the condition of others." Finally, the OCC noted that "the concentration of risks on the clearinghouse exposes all participants to the risk that the clearinghouse itself may fail."

In quantifying suggestions that dealers and end-users could benefit from well designed clearinghouse arrangements, the OCC stated that "national banks should only participate in those clearinghouse arrangements that meet the six minimum standards for netting and settlement schemes (**See Appendix D**)." Regulators also noted that some market participants may benefit more than others should a clearinghouse system be implemented for the OTC markets. The OCC indicated that end-users "may derive more benefit than dealers from the substitution of the clearinghouse's creditworthiness for that of individual counterparties, as end-users may not be as adept as dealers at analyzing the credit risks of counterparties." The OCC added that dealers, on the other hand, "may benefit more than end-users from the benefits of multilateral netting....dealers may also derive competitive benefits from a clearinghouse arrangement to the extent that participation in the clearinghouse masks the dealer's portfolio position." The other regulators generally concurred that dealers have the most to lose from a clearinghouse arrangement, while small, less creditworthy participants have the most to gain.

6. THE DEALER COMMUNITY

The dealer community is largely opposed to implementation of a clearinghouse mechanism for swaps transactions, with some dealers more vehemently opposed than others. There is agreement among dealers, however, that some form of mild clearinghouse is beneficial and perhaps necessary as the swaps markets evolve. Despite this mutual general acceptance, it is very unlikely that a push for clearinghouse implementation will originate from the dealer community.

Several reasons exist for this. Dealers themselves currently function, to a certain extent, as clearinghouses. They dominate the market and are naturally reluctant to have their power base and authority dispersed. Certain qualifications such as size, technical

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[219] The Securities and Exchange Commission (SEC) took a slightly separate view from the other regulators on the issue of systemic risk. On this matter, the SEC noted: "...a clearinghouse offset that included multilateral netting by novation (netting by novation has been recognized by regulators in capital adequacy rules while close-out netting, which is one of the BIS proposals, is currently under consideration) would reduce systemic risk by improving credit availability and enhancing market and dealer liquidity." The SEC added that "many details need to be worked out before an effective clearinghouse offset mechanism could be established."

capability and capital adequacy are necessary to qualify as a dealer in these instruments; imposition of a clearinghouse will "socialize" the swaps market and allow lower-rated entities to participate in a highly lucrative market.

All dealers in the swaps market have outstanding credit ratings. They particularly enjoy this status because they have strived over the years to achieve such high ratings. Establishment of a clearinghouse will delineate the hierarchical nature of dealers based on credit ratings and financial prowess, which is the current structure in these markets. With a clearinghouse in place, a far larger number of organizations would be able to participate in the markets, and firms with lower credit ratings would become more active, at the expense of entities with higher credit ratings.

Dealers can benefit from the reductions in credit and liquidity exposures resulting from clearinghouse offset. As mentioned before, multilateral netting will generally benefit dealers more than other market participants; dealers may also derive competitive benefits from a clearinghouse arrangement to the extent that participation in the clearinghouse masks the dealer's portfolio position.

A final important point to note for the dealer community under a clearinghouse system is the shared responsibility which would be assumed by a dealer in the event of another dealer's default. A clearinghouse mechanism naturally concentrates activity and some say poses systemic risk problems. Entities with an ability to pay would be most responsible for losses incurred by a failed participant under a clearinghouse system. Consequently, some dealers could potentially be exposed to large financial obligations.

7. THE END-USER COMMUNITY

The end-user community widely recognizes that certain benefits are associated with implementation of a clearinghouse mechanism for the swaps markets, but indicated that they are overwhelmingly satisfied with the current system. Similar to dealers, various end-users expressed a favorable opinion toward some mild form of clearinghouse arrangement being associated with the swaps market at some point in the future. The push for implementation also, however, will not likely come from the end-user community.

Primary benefits of clearinghouse to the end-user community include greater participation and access in these markets, as end-users would have a wider universe of dealers to choose from; potential costs savings as the number of dealers would swell and reduce transactional costs to ensure that they receive business in a more competitive environment; the reduction of counterparty credit risks since the clearinghouse would substitute for individual counterparties;[220] and reduced liquidity exposures.

The benefits are attractive for the end-user community, but market participants overwhelmingly indicated satisfaction with the system as it is. One end-user representative questioned the rationale to change the system if it is working well.

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[220] End-users are typically not as adept as dealers at analyzing credit risk.

E. REGULATION OF THE FINANCIAL DERIVATIVE MARKETS[221]

1. OVERVIEW

Derivative activities are governed by multiple types and levels of regulation, depending upon the product used, the manner in which it is used, and the type of entity involved. Oftentimes, for example, a single derivative transaction involves two counterparties regulated by different agencies, such as a bank regulated by the OCC and a securities firm regulated by the SEC. In another derivative transaction, an entity, such as a bank, utilizing an exchange-traded derivative is regulated by the OCC where the derivative product is regulated by the CFTC. Certain entities who utilize derivatives are not regulated at the federal level or at all, although the derivative products they use may be subject to certain regulation.

The regulation of derivatives may be divided into the:

- Type of Product; and
- Entity Involved.

For purposes of this section, the regulation of derivatives is also separated in terms of:

- Capital Standards;
- Accounting Treatment; and
- Disclosure.

For the opinions of regulators regarding the adequacy of derivative regulations, see Questions posed to the regulators by Rep. Leach.

2. REGULATION BY TYPE OF DERIVATIVE PRODUCT

Derivatives are entered into throughout the world through two different markets: the Over-the-Counter (OTC) Market; and the Exchange Market.

OTC derivatives are those which are customized and not under the jurisdiction of the Commodity Futures Trading Commission (CFTC) or have been exempted by the CFTC from its jurisdiction.

Exchange-traded derivatives are those which are traded on organized exchanges and are regulated by the CFTC and the SEC.

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[221] See Questions #1, #2, #3, #5, #6, and #7 posed to the regulators Representative Leach.

a. OTC Derivatives

OTC derivatives are those derivatives which are customized to meet the specific terms and conditions of institutions. OTC derivatives include swaps, forwards, hybrids, and certain options. OTC derivatives are not under the jurisdiction of the Commodity Futures Trading Commission (CFTC), including forwards, certain transactions in the interbank market, certain foreign currency transactions, and trade options;[222] or have been recently exempted by the CFTC from its jurisdiction, namely swaps, certain hybrids, and certain energy contracts.[223] In addition, any derivative considered a security would fall under the jurisdiction of the SEC. OTC derivatives are regulated to the extent that regulatory agencies oversee the entities that utilize OTC derivatives. For example, when financial institutions and securities firms utilize OTC derivatives, they are subject to the regulation of their primary regulator, namely the OCC, FDIC, FED, OTS, or the SEC.[224] In addition, the SEC has jurisdiction, in general, over those derivatives which are considered a "security" under Section 3(a)(10) of the SEC Act of 1934. Insurance companies would have no federal regulator but would be regulated by the respective state insurance commissioner.

Certain OTC derivative activities are subject to anti-fraud and anti-manipulation regulations of the CFTC and SEC, regardless of the participant. The CFTC has exempted swaps, hybrids, and certain energy products from its jurisdiction. However, the CFTC does not exempt swaps from all statutory anti-fraud and anti-manipulation prohibitions.[225] Energy contracts are also subject to CFTC provisions prohibiting price manipulation. Swaps and energy contracts are not exempt from the so called "jurisdictional accord" between the CFTC and the SEC[226] which relates to the allocation of regulatory responsibility for stock index futures contracts and options between the two agencies and imposes certain interagency requirements with respect to approval of stock index futures trading. Trade option transactions, which are exempt from CFTC regulation, are subject to prohibitions against fraud, certain types of representations, and unreasonable failures to secure prompt execution of commodity options orders by persons receiving such orders. Currently, trade options on agricultural commodities are prohibited. In addition, to the extent that an OTC securities derivative product is

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[222] Regarding forwards, see Sec. 1a(11) of the CEA, 7 USC §1. Regarding those transactions in the interbank market, see 7 USC §2. Also regarding interbank market, see 50 Fed. Reg. 42963 (Oct. 23, 1987).

[223] Regarding swaps and hybrids, see Section 4(c)(1) of the Futures Trading Practices Act of 1992, 7 USC §6(c)(1). Regarding swaps, see Section 4(c)(5)(B) of the Futures Trading Practices Act of 1992, and 58 Fed. Reg. 5587 (January 22, 1993). Regarding hybrids, see Section 4(c)(5)(A) of the Futures Trading Practices Act of 1992, and 58 Fed. Reg. 5580 (January 22, 1993). Regarding energy contracts, see 58 Fed. Reg. 21286, 21294 (April 20, 1993). In addition, the CFTC has retained some residual anti-manipulation or anti-fraud authority for some of these exempt instruments.

[224] For further information on the regulation by the agencies, see the next Section E.3.: **Regulation by Type of Entity Using Derivatives.**

[225] Although the CFTC's swaps exemptive provision preserves the applicability of statutory anti-fraud and anti-manipulation prohibitions, these prohibitions are limited to specified types of conduct involving futures contracts or the cash market. There is no statutory or regulatory anti-fraud provision expressly designed to cover swaps. For example, Section 4b of the CEA, the general anti-fraud provision, prohibits, among other things, any person from cheating, defrauding or attempting to cheat or defraud any person "in or in connection with any order to make, to the making of, any contract of sale of any commodity for future delivery ... for or on behalf of any other person." Liability under this provision thus would arise from a swap transaction only to the extent that a futures contract under the CEA were shown to be involved. Further, some have suggested that the statutory requirement that the transaction be one undertaken "for or on behalf of" another person could be read to confine liability to persons acting in an agency or broker capacity of another.

[226] Section 2(a)(1)(B) of the CEA, 7 USC § 2a.

offered and sold between private parties without the assistance or intermediation of a broker-dealer or registered investment adviser, anti-fraud provisions set forth in Section 17 of the Securities Act of 1933, together with the anti-fraud provisions of Rule 10b-5 of the Securities Act of 1934, would apply.[227] Broker-dealers involved in OTC securities derivative transactions are subject to additional SEC regulation.

During the past 10 years, legal uncertainty concerning the status of some derivative transactions has arisen. This is a result of the introduction of newly designed financial instruments containing elements of futures, securities, and options and of varying interpretations of the scope of the CEA and the term futures contract. This uncertainty was addressed in the Futures Trading Practices Act of 1992 (FTPA)[228] and set forth in Section 4(c) of the CEA. This legislation authorized the CFTC to exempt any agreement, contract or transaction from certain exchange-trading requirements. Generally, the basis for the exempted transactions are (1) unsuitable for exchange trading and (2) entered into by parties who are engaged in a line of business involving the commodity that is the subject of the transaction or who satisfy financial criteria designed to assure their competence to engage in such transactions without otherwise applicable regulatory protections.

(1) Swaps

Under the authority of the FTPA, the CFTC published final rules on January 22, 1993 exempting swap transactions meeting certain criteria from most CFTC regulation.[229] The exemption is limited to swap agreements entered into by "eligible swap participants," which include various categories of institutional and commercial entities and natural persons with substantial assets.[230] In addition to restricting the categories of participants eligible to participate in exempt transactions, the CFTC's swaps exemptive rules impose restrictions upon the design and execution of the transactions that distinguish them from exchange-traded futures contracts. To qualify for exemption: (i) the swap may not be part of a fungible class of agreements that are standardized as to their material economic terms; (ii) the creditworthiness of any party having an actual or potential obligation under the swap agreement must be a material consideration in entering into or determining the terms of the swap agreement; and (iii) the swap agreement may not be entered into or traded on a multilateral transaction execution facility. Swaps are subject to certain anti-fraud and anti-manipulation prohibitions, but in all other respects occur free of the regulatory framework applicable to futures exchanges and intermediaries. No prescriptive, affirmative requirements as to the conduct of the transactions, other than the participant, design and execution criteria of the exemptive rules, apply to qualifying

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[227] According the CFTC report entitled "OTC Derivative Markets" dated October, 1993, these anti-fraud provisions would appear to be the primary applicable protections of the SEC's regulatory framework over OTC securities derivatives.

[228] PL 102-546, 106 Stat. 3590.

[229] 58 Fed. Reg. 5587 (January 22, 1993).

[230] Eligible swap participants include, for example: banks, investment companies, corporations or other entities which have total assets exceeding $10 million or who have net worth exceeding $1 million and are entering into the swap transaction in connection with the conduct of their business, employee benefit plans subject to the Employee Retirement Income Security Act of 1974 (ERISA) with total assets exceeding $5 million, broker-dealers, FCMs, and natural persons with total assets exceeding $10 million.

swaps.[231]

(2) Hybrid Products

In July 1989, the CFTC adopted rules regarding certain hybrid instruments combining characteristics of commodity options with debt, preferred equity or depository interests. The rules establish a safe harbor from CFTC regulation for these instruments. In addition, in January 1989 and April 1990, the CFTC issued a statutory interpretation applicable to hybrid instruments that combine characteristics of futures contracts or commodity options with debt or depository instruments. The CFTC essentially determined that the commodity component of instruments covered by the exemption was relatively insignificant in nature and that they would be deemed to be excluded from CFTC jurisdiction. And under the authority of the FTPA, the CFTC published final rules on January 22, 1993 exempting from most CFTC regulation hybrid instruments.[232]

(3) Energy Contracts

On April 13, 1993, the CFTC issued an order exempting from CFTC regulation certain contracts between commercial participants for the deferred purchase or sale of energy products.[233] The exemptive order was proposed in response to a request for exemptive relief submitted by a group of companies, including oil and natural gas producers, processors, and merchandisers. According to the CFTC, the exemption was intended to provide greater legal certainty regarding trading in these products. Congress encouraged the CFTC to review these contract to determine whether exemptive or other action should be taken.[234] The CFTC's review resulted in this final order which applies retroactively to all transactions entered into on or after October 23, 1974.

(4) Forwards and Interbank Transactions

The CEA excludes forwards and certain financial transactions traded in the interbank market from CFTC jurisdiction,[235] and therefore such transactions are

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[231] Although the CFTC's swaps exemptive provision preserves the applicability of statutory anti-fraud and anti-manipulation prohibitions, these prohibitions are limited to specified types of conduct involving futures contracts or the cash market. There is no statutory or regulatory anti-fraud provision expressly designed to cover swaps. For example, Section 4b of the CEA, the general anti-fraud provision, prohibits, among other things, any person from cheating, defrauding or attempting to cheat or defraud any person "in or in connection with any order to make, to the making of, any contract of sale of any commodity for future delivery ... for or on behalf of any other person." Liability under this provision thus would arise from a swap transaction only to the extent that a futures contract under the CEA were shown to be involved. Further, some have suggested that the statutory requirement that the transaction be one undertaken "for or on behalf of" another person could be read to confine liability to persons acting in an agency or broker capacity of another.

[232] 58 Fed. Reg. 5580 (January 22, 1993).

[233] Specifically, the exemption applies to "contracts for the purchase and sale of crude oil, condensates, natural gas, natural gas liquids or their derivatives which are used primarily as an energy source." 58 Fed. Reg. 21286, 21294 (April 20, 1993).

[234] H.R. Rep. No. 987, 102nd Congress, 2nd Session 82 (1992).

[235] Regarding forwards, see Sec. 1a(11) of the CEA, 7 USC §1. Regarding those transactions in the interbank market, see 7 USC §2. Also regarding interbank market, see 50 Fed. Reg. 42963 (Oct. 23, 1987).

essentially unregulated. Specifically excluded from the term "future delivery" in Section 1a(11) of the CEA, and thus from the CFTC's jurisdiction, is "any sale of any cash commodity for deferred shipment or delivery, commonly referred to as cash forward contracts."

(5) Foreign Currency Transactions

Foreign currency transactions are subject to varying types of regulation under the CEA, depending on the context in which they occur and the nature of the counterparties. The CEA excludes from its coverage "transactions in foreign currency" which included spot (or cash) foreign currency transactions and forward contracts on foreign currencies. Foreign currency futures and option transactions are subject to the CEA exchange-trading requirement and all other applicable requirements, except to the extent that foreign currency options may be traded on national securities exchanges subject to SEC regulation[236] or are exempted by CFTC rule. Two CFTC regulatory exemptions are potentially available with respect to foreign currency options: the trade option exemption, which is limited to options offered to commercial users; and the swaps exemption, which includes within the definition of swap agreement an agreement which is a "currency option." The CEA also excludes other specified financial instruments "unless such transactions involve the sale thereof for future delivery conducted on a board of trade." Known as the "Treasury Amendment," this provision was included in the CEA in 1974 at the request of the Department of the Treasury to exclude from CEA regulation transactions in foreign currency and other specified financial instruments in the interbank market. The Treasury Amendment has been subject to considerable debate and litigation. Its legislative history suggests that the statutory provision was intended to preclude CEA regulation of the interbank market. In a 1985 Statutory Interpretation, the CFTC took the position that the exclusion is not applicable to foreign currency transactions marketed to members of the general public, but rather, that the exclusion was limited to transactions between sophisticated and informed institutions; however, not all courts have agreed with that view.[237]

(6) Trade Options

Trade options are exempted by CFTC rules from the general prohibition against off-exchange futures and commodity options transactions. They are off-exchange commodity options offered and sold to commercial entities whose business involves the commodity (or by-products thereof) that is the subject of the transaction and who enter into the transaction for purposes related to that business. Rule 32.4(a) permits the sale

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[236] Foreign currency options traded on CFTC-regulated exchanges are subject to the CFTC's regulatory framework to the same extent as all other futures and exchange-traded commodity options; foreign currency options trade on national securities exchanges are regulated by the SEC. Section 4c(f), 7 USC § 6a(f).

[237] Statutory Interpretation, "Trading in Foreign Currencies for Future Delivery," 50 Fed. Reg. 42963 (Oct. 23, 1985). The issue of the CFTC's interpretation and this limitation has been raised in two recent cases. In one, the district court rejected the CFTC's interpretation (Laszlo N. Tauber, M.D. v. Salomon Forex Inc., et al., (E.D. Va., June 1, 1992, aff'd, No. 92-1406, 4th Cir. October 18, 1993)). On October 18, 1993, the U.S. Court of Appeals for the Fourth Circuit decided the appeal in this case. While it affirmed the judgment of the district court, the Court of Appeals made clear that its action was not intended to "result in the use of this circuit as a base for marketing off-exchange futures contracts to the general public." Slip op., at 19. In the other case, the district court agreed with the CFTC's interpretation (CFTC v. Standard Forex, Inc. et al., CV-93-0088 (CPS) (E.D.N.Y., August 9, 1993)). That case presently remains on appeal.

of off-exchange commodity options in circumstances in which the offeror "has a reasonable basis to believe that the option is offered to a producer, processor or commercial use of, or a merchant handling, the commodity which is the subject of the commodity option transaction" and that such commercial party is offered or enters into the transaction" solely for purposes related to its business as such."

b. Exchange-Traded Derivatives

Exchange-traded derivatives are those derivatives which are standardized and are traded on organized exchanges. Exchange-traded derivatives include futures, commodity options, and standardized securities options. Such exchange-traded derivatives are regulated by the CFTC[238] and the SEC,[239] in accordance with the respective products and exchanges they regulate.

Futures and options transactions are widely used by producers, speculators, dealers, financial institutions, collective investment vehicles, and other users of underlying commodity interests. When such entities use exchange-traded derivatives, they are subject to the rules and regulations of the exchanges, the CFTC, the SEC, and other self-regulatory organizations. When financial institutions and securities firms utilize exchange-traded derivatives, they are also subject to the regulation of their primary regulator, namely the OCC, FDIC, FED, OTS, or the SEC.[240]

The regulatory framework established by the CEA and CFTC regulations address market integrity, financial integrity, and customer protection. Briefly stated, the CEA and the CFTC regulations[241] regulate the futures and commodity option exchanges and their clearing facilities, the design of products traded, and the persons soliciting or handling transactions for customers. Transactions in commodity futures contracts must occur only on or subject to the rules of exchanges, which have been designated by the CFTC as contract markets and which are subject to CFTC oversight. Under the CEA, an exchange must obtain a designation from the CFTC for every commodity it wishes to trade and must meet standards in the CEA and CFTC regulations to obtain and maintain that designation.[242] The CEA: i) contains broad anti-fraud and anti-manipulation provisions;[243] ii) requires registration as well as reporting and

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[238] Specifically, Section 2(a)(1)(A)(i) of the Commodity Exchange Act grants to the CFTC exclusive jurisdiction over "accounts, agreements (including any transaction which is of the character of, or is commonly known to the trade as, an 'option,'), and transactions involving contracts of sale of a commodity for future delivery and all services, rights, and interests in which contracts for future delivery are presently or in the future dealt in." 7 USC §2

[239] In general, the SEC has jurisdiction over derivatives which are considered a "security" under Section 3(a)(10) of the SEC Act of 1934.

[240] For further information on the regulation by the CFTC and the other agencies, see Section E.3.: Regulation by Type of Entity Using Derivatives.

[241] 17 CFR §1 et seq.

[242] CEA §§ 5 and 5a.

[243] See, e.g., Sections 4a, 4b, 4o; 7 USC §§ 6a, 6b, 6o.

recordkeeping by exchanges;[244] iii) prohibits noncompetitive trading practices such as wash sales and fictitious sales;[245] iv) gives the CFTC broad authority to conduct investigations and to bring civil or administrative enforcement actions for violations of the CEA;[246] v) allows the CFTC to approve, suspend or revoke contract market designations, disapprove and alter exchange rules that are inconsistent with the objectives of the CEA and direct the exchange to take emergency action;[247] vi) sets forth private rights of action in court and a CFTC reparations procedure designed to enable customers to bring damage actions against commodity professionals for fraud or other violations of the CEA;[248] and finally, vii) the CEA establishes criminal sanctions for price manipulation, embezzlement and other specified fraudulent practices related to commodity futures trading.[249]

Certain protections are basic to both the futures (CFTC) and securities (SEC) regulatory and self-regulatory regimes for exchange marketplaces.[250] The financial integrity of transactions on CFTC and SEC regulated exchange markets is supported by requirements applicable both to intermediaries acting for customers in regulated transactions and to the exchanges on which such transactions are executed. FCM and broker-dealer minimum capital requirements, financial reporting requirements, and customer funds protections help to assure that customer funds and property deposited with a broker are secure. Further, the integrity of transactions effected on the exchange markets is supported by clearing organizations which clear, settle, and guarantee performance of obligations to their clearing members. Clearing organizations impose their own capital requirements for clearing members.

Margin requirements[251] further contribute to the maintenance of fair and orderly markets. First, margin serves to prevent investors from entering into highly leveraged positions and incurring obligations which they will be unable to satisfy in the event of a substantial market decline. Secondly, margin protects the capital of broker-dealers and clearing firms by reducing the risk that their capital will be called upon to satisfy the obligations of overly-leveraged investors. Finally, margin also serves to minimize systemic risk to the entire financial system during periods when markets are under stress, and when defaults by otherwise highly-leveraged participants would pull liquidity out of the system at a time when it is under the most stress.

Both futures and securities regulatory structures include requirements designed to assure customer protection, competitiveness, and transparency of exchange markets. The

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[244] See, e.g., Sections 4d, 4e, 4g, 4i, 4k, 4m, 4n; 7 USC §§ 6d, 6e, 6g, 6i, 6k, 6m, 6n.

[245] See, e.g., Section 4c; 7 USC § 6c.

[246] See, e.g., Sections 6c, 8; 7 USC §§ 13a-1, 12.

[247] See, e.g., Sections 5, 5a, 5b, 8a(7), 8a(9); 7 USC §§ 7, 7a, 7b, 12a(7), 12a(9).

[248] See, e.g., Sections 14, 22; 7 USC §§ 18, 25.

[249] Section 9; 7 USC § 13.

[250] Commodity Futures Trading Commission, OTC Derivative Markets and Their Regulation, October 1993.

[251] For a more detailed discussion of margin requirements, see Section E.3.g.: Commodity Futures Trading Commission.

CFTC rules require execution of futures transactions by open outcry, and prohibit fictitious trades and other trading activities. Securities brokers have an obligation to obtain best execution of orders entrusted to them. Both the CFTC and the SEC require markets subject to their regulation to disseminate publicly information on price and volume of transactions and to maintain records of transactions to permit reconstruction of trading and detect and sanction abuses. Under CFTC and SEC requirements, regulated exchanges maintain day-to-day market and trade practice surveillance programs to detect potential trading abuses and manipulative activity. Under both regulatory frameworks, the exchanges, as self-regulatory organizations (SROs), monitor trading patterns for possible trade practice violations and market manipulations. Arbitration procedures have also been established by the SROs.

A futures contract may not be traded until the sponsoring exchange has been designated by the CFTC as a contract market for such trading. The federal securities laws do not contain an express "economic purpose" test as does the CFTC, but the SEC must condition approval of any new product proposed for exchange trading upon a finding that the introduction of the product is in the public interest.

Under CEA and CFTC rules, futures exchanges are required to maintain market surveillance programs to detect possible congestion or other market situations conducive to price distortions. To prevent market distortions and protect the delivery process for futures contracts, the CFTC has established or approved exchange-established speculative position limits or position accountability limits. The CFTC and the SEC have also approved coordinated circuit breaker rules to control trading. The CFTC and the SEC regulatory frameworks address in largely parallel fashion the exchange-traded derivatives activities in intermediaries engaging in transactions in regulated products.

Both the CFTC and the SEC set minimum capital requirements for FCMs and broker-dealers and set requirements for the protection of customer funds and property. The CFTC's capital rule defers to the SEC's haircut[252] proprietary positions in securities, to reflect the market risk in such positions, and to the SEC's minimum capital requirement and calculation methodology if securities brokerage is a given firm's dominant line of business. FCMs and broker-dealers are subject to statutory bankruptcy provisions which are designed to protect customers and reduce systemic implications.

The futures and securities regulatory frameworks require the registration of firms acting as brokers for customers and of their salespersons. FCMs and broker-dealers are also subject to disclosure and sales practice requirements.

CFTC and SEC Jurisdiction over Certain Derivative Transactions:[253] Regulatory jurisdiction over certain derivative transactions has in the past been claimed by both the CFTC and the SEC. The Futures Trading Practices Act of 1992 did give the CFTC the authority to exempt certain types of instruments from its jurisdiction, thus giving the CFTC the authority to defer to another regulator where the economic characteristics of

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[252] A "haircut" is a deduction taken in a firm's capital computation in order to account of specific risks and uncertainties and is enumerated in regulatory capital rules. The intended regulatory result is that a firm's capital, after the deduction of all required haircuts, will be the amount of liquid capital a firms has, after a reserve has been set aside of market contingencies.

[253] See also Question #7 posed to the CFTC by Representative Leach.

the instrument dictate.

Since 1983, Section 2(a)(1)(B) of the CEA and related securities laws have divided jurisdiction between the SEC and the CFTC. Previously, in 1981, there was a disagreement between the agencies concerning jurisdiction over options on securities guaranteed by GNMA. While litigation on the issue was pending, the agencies reached an agreement to be codified in law, known as the Johnson-Shad Accord,[254] named for the agency Chairmen participating in the agreement. The theory behind the Accord was for the CFTC to regulate "markets and instruments that serve a hedging and price discovery function while the SEC will regulate markets and instruments with an underlying investment purpose."[255]

The Accord was subsequently codified in Section 2(a)(1)(B) of the CEA and related securities laws. Pursuant to the Accord, the SEC has jurisdiction over securities, including options on securities (including exempted securities), options on certificates of deposit, options on stock indexes, and options on foreign currency traded on a national securities exchange; the CFTC has jurisdiction over all futures contracts, including futures contracts on stock indices, and options on futures contracts and physical commodities and foreign currencies.[256] There is no trading in futures on individual securities. In addition, "in recognition of the SEC's unique responsibilities over the trading markets for corporate equity and municipal securities, [Section 2(a)(1)(B)] specifies certain criteria to govern approval by the CFTC of futures trading in a group or index of such securities."[257] Thus, in order for the CFTC to designate a contract market to trade a futures contract on a securities index, the contract must be cash-settled, not readily susceptible to price manipulation and written on a broad-based index. The contract is also subject to the SEC's approval.

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[254] The Johnson-Shad Accord was passed into law by the Congress as part of both the Securities Acts Amendments of 1982 and the Futures Trading Act of 1982. See P.L. No. 97-303, 96 Stat. 1409 (1982) and 97-444, 96 Stat. 2294 (1982).

[255] H.R. Rep. No. 97-565, Part I at 40.

[256] Also, Section 2(a)(1)(A)(i) of the Commodity Exchange Act grants to the CFTC exclusive jurisdiction over "accounts, agreements (including any transaction which is of the character of, or is commonly known to the trade as, an 'option,'...), and transactions involving contracts of sale of a commodity for future delivery ... and all services, rights =, and interests in which contracts for future delivery are presently or in the future dealt in." 7 USC §2.

[257] H.R. Rep. No. 97-565, Part I at 39.

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3. REGULATION BY TYPE OF ENTITY USING DERIVATIVES

a. General Discussion of the Banking Agencies' Regulation of Derivatives

The banking and thrift agencies, namely the FED, the OCC, the FDIC, and the OTS, have authority over the derivative transactions of the entities they regulate. To the extent that such entities use exchange-traded derivatives, they are subject to certain CFTC and SEC regulation. Certain anti-fraud and anti-manipulation rules of the CFTC and SEC also apply to certain OTC derivatives used by such institutions.[258] Certain unique rules and regulations are applied by each agency, although certain common elements of regulation exist among agencies.

The risk-based capital standards agreed to under the Basle Accord in 1988 are the basis of risk-based capital standards set by the FED, OCC, FDIC, and OTS. Currently, the risk associated with derivatives is accounted for in the bank and thrift capital standards by assessing the current credit risk exposure, plus an add-on for future exposure based upon 0-5% of the notional amount. The current credit exposure (due to the risk that a counterparty will default) is measured as "replacement cost" which is the cost to an institution to replace a contract on which a counterparty has defaulted. The replacement cost plus the add-on is referred to as the "credit equivalent amount" which is then multiplied by up to a 50% risk-weight to arrive at the risk-based capital charge.[259]

In a Joint Study,[260] the Federal Reserve, OCC, and FDIC described the regulation of derivatives common among the three banking agencies in the following way:

(1) On-Site and Off-Site Examinations

Examinations evaluate the risks inherent in off-balance sheet transactions and virtually all other banking activities. Any full-scope, on-site examination contains a review of the institution's infrastructure for measuring and controlling risk. This review is especially important regarding derivative activities. The banking agencies closely monitor troubled institutions through on-site examinations and off-site analysis of reported information. Specifically, the banking agencies generally require troubled institutions to minimize their existing risk and to limit the size of new off-balance sheet activity. The regulatory agencies also monitor and limit participation of troubled institutions in instruments that are not credit sensitive. Such supervisory oversight significantly reduces the potential that a troubled institution might seek to recover past losses by taking speculative positions in derivative instruments. To date, no commercial bank failure has resulted from derivative products exposure.

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[258] See Section E.2.a.: OTC Derivatives.

[259] For a more detailed discussion of the capital standards, see Section E.4.: Capital Standards.

[260] "Derivative Product Activities of Commercial Banks," Joint Study conducted in response to Questions Posed by Senator Riegle on Derivative Products, January 27, 1993.

(2) Financial Data

Commercial banks are required to disclose certain information about their derivative and other off-balance sheet activities each quarter in their Call Reports. Bank holding companies provide similar data for the consolidated holding company in their quarterly Y-9C reports filed with Federal Reserve. Both reports disclose the notional values of interest rate swaps, futures and forward contracts, option contracts, and similar contracts involving commodities and equities, and are reviewed for accuracy during on-site examinations. This information does not address the institutions's actual exposures, but it is useful, according to the regulators, for identifying major market participants. In order to assess capital requirements under the risk-based capital accord, the reports also collect information regarding the market replacement costs of interest rate contracts and foreign exchange contracts that are of positive market value to the reporting entity. Annual report disclosures of the "amount of accounting loss," as required under FASB 105, generally include market value data for certain exchange-traded contracts as well as foreign exchange contracts. The banking agencies are considering various disclosure and accounting changes to take into account the growing market.[261]

(3) Market Intelligence and Studies

All of the banking agencies rely on internal and external sources for gathering market intelligence. Many of these efforts require extensive interviews with market participants, analyses of available data on transaction volumes and prices, and theoretical assessments of the inherent risks. For example, the Federal Reserve open market and foreign exchange staffs in Washington and New York regularly monitor developments in a broad range of financial markets. Banking agencies have also participated in a number of studies and research efforts regarding derivatives such as the recent BIS studies.

b. The Federal Reserve Board (FED)

The Federal Reserve Board is the primary regulator of bank holding companies and state-member banks. The Federal Reserve also has authority over the activities of foreign branches of member banks, Edge and Agreement Corporations,[262] foreign subsidiaries of bank holding companies, and foreign banking organizations with operations in the United States. The FED regulates the derivative activities of such entities who act as both dealers and end-users of derivatives. To the extent that such entities use exchange-traded derivatives, they are subject to certain CFTC and SEC regulation. Certain anti-fraud and anti-manipulation rules of the CFTC and SEC also apply to certain OTC derivatives used by such entities.[263]

The FED regulates and monitors the derivative activities of institutions under its

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[261] For further information on disclosure and accounting, see Section E.5.: Accounting Treatment for Financial Derivatives and Section E.6.: Disclosure Treatment for Financial Derivatives.

[262] Agreement corporations are those which have an agreement or undertaking with the FED under section 25 of the FRA, 12 USC 601-604a.

[263] See Section E.2.a.: OTC Derivatives.

jurisdiction through its risk-based capital adequacy guidelines, policy guidance on safe and sound banking practices, and on-site examinations.[264] Significant supervisory and regulatory policies and procedural matters are communicated primarily through the use of a system of letters and a number of technical supervisory manuals designed to provide guidance to examiners during on-site examinations. Additional examination procedures developed on-site to meet specific situations of individual organizations, reviews of reports received from banking organizations, and examiner training are also utilized.

The objectives of on-site examinations include: 1) evaluating an institution's soundness and compliance with banking laws and regulations; 2) appraising the quality of management and directors; and 3) identifying areas for corrective action. A number of Federal Reserve supervisory manuals deal directly with, or contain sections pertaining to, the oversight of derivative activities. These documents include:

- Trading Activities Examination Manual. This manual takes a comprehensive approach to evaluating an institution's derivative activities, including front and back office activities and risk measurement;

- Commercial Bank Examination Manual. Regarding derivatives, this manual contains information on capital adequacy, funding practices, examination of off-balance sheet items, risk management, controls, international operations involving foreign exchange and LDC asset swaps, and internal controls used in conducting foreign exchange activities;

- Merchant and Investment Bank Examination Manual. This manual provides specific examination guidelines for activities of merchant and investment bank subsidiaries of U.S. banks, including their swap, FRA, futures, and options activities;

- Bank Holding Company Supervision Manual. This manual contains exam procedures for the derivative activities of nonbank subsidiaries of BHCs that have been authorized to underwrite and deal in certain debt and equity securities that cannot be underwritten or dealt in by member banks directly, of those banks who act as an advisor for swaps, of FCM subsidiaries of BHCs which engage in a variety of permissible activities, including clearing of certain futures contracts and giving investment advise on financial futures and options on futures; and

- Guidelines and Instructions for Examinations of Edge Corporations. This manual sets procedures for examining derivative activities of Edge corporations.

The FED examines the use of derivative instruments in customer trust accounts to ensure that their use is in accordance with applicable fiduciary principles, laws, and regulations. Customized examination procedures are also employed.

Examiner training takes place at four levels, each of which includes discussion of

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[264] For a discussion on regulation common among the FED and other banking agencies, see above Section B.3.a.: General Discussion of the Banking Agencies' Regulation of Derivatives. For a discussion of the capital standards, see Section B.4.: Capital Standards. For information on disclosure and accounting, see Section B.5.: Accounting Treatment for Financial Derivatives and Section B.6.: Disclosure Treatment for Financial Derivatives.

derivatives: 1) core curriculum; 2) specialized courses and conferences; 3) courses from private organizations; and 4) educational material.[265]

(1) Bank Holding Companies

The FED's authority over bank holding companies and their nonbank subsidiaries derives from the Bank Holding Company Act of 1956.[266] Under the Act, a bank holding company generally may not engage in any activity or own shares of any company engaged in any activity, other than banking or managing or controlling banks, subject to certain exceptions.[267] One of these exceptions permits bank holding companies to engage in any activity, or own shares of any company engaged in any activity, that the Board has determined, either by regulation or order, to be so closely related to banking or managing or controlling banks as to be a proper incident to banking.[268] The FED therefore has the authority to determine that particular derivative activities are permissible generally for bank holding companies or to approve specific activities for individual companies. Subject to prior approval, the FED has generally permitted bank holding company nonbank subsidiaries to engage in certain foreign exchange transactions, including OTC derivative transactions, either as agent for customers or for their own account for hedging purposes. Bank holding companies and their nonbank subsidiaries also are permitted to engage in either exchange-traded or OTC derivative transactions incidental to other approved activities in order to hedge exposure arising from those activities.

Bank holding company nonbank subsidiaries generally are permitted, subject to prior approval, to act as Futures Commission Merchants (FCMs) in executing and clearing certain exchange-traded derivatives linked to bullion, foreign exchange, government securities, certificates of deposit, other money market instruments, and stock and bond indices, either as agent for customers or for their own account for hedging purposes. FCMs are regulated by the CFTC. The FED has also approved one nonbank subsidiary to trade in a group of nonfinancial futures, subject to the limitation that the subsidiary act as agent for customers and not for the institution's own account except as necessary to limit damages in the event of a customer's default.

In a small number of cases, the FED has permitted nonbank subsidiaries to trade certain exchange-traded derivative instruments linked to government securities and money market indices for their own account for purposes other than hedging. The FED also has permitted a limited number of nonbank subsidiaries to engage in interest rate and currency swaps and related transactions, including swap option contracts, as principal or agent, for purposes other than hedging. One such subsidiary has been permitted to buy or sell for its own account OTC option contracts linked to government securities for purposes other than hedging.

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[265] For more detail, see the Federal Reserve's answer to Question #1a posed by Representative Leach.

[266] 12 USC § 1841 et seq.

[267] 12 USC § 1843(a).

[268] 12 USC § 1843(c)(8).

Derivative dealing activities do not in practice take place at the bank holding company level, but instead take place at a bank or non-bank subsidiary level. Derivatives utilized in an end-user capacity can be used at both the bank holding company level and a bank or non-bank subsidiary level.

(2) State Member Banks

State banks are chartered under state law and must have authority under their state charters to engage in derivative transactions. According to industry sources, only four state-chartered banks are currently dealers in derivatives,[269] with the rest of the state banks being end-users. High credit rating and sophistication requirements limit the banks and other firms who act as dealers.

The FED cannot authorize a state-member bank to engage in activities not permissible under applicable state law, but under some circumstances, can limit or condition the activities of state-member banks. The FED has the authority to limit the activities of state-member banks consistent with Section 24 of the FDI Act.[270] Section 24 generally prohibits an insured state bank from engaging as principal in any activity not permissible for a national bank, unless the FDIC determines the activity poses no threat to the insurance fund and the bank is in compliance with applicable capital standards.

Limits on the activities of a state member bank may also be imposed by the FED where the activity poses a threat to the safety and soundness of the bank.[271]

Generally, activities related to OTC interest rate and foreign exchange derivatives are considered to be sufficiently related to traditional bank activities in foreign exchange and the management of interest rate exposure. State banking authorities in a number of states, therefore, have permitted state-chartered banks in their jurisdictions to engage in such transactions as brokers or agents or for their own accounts, either to hedge existing positions or to generate revenue.

State member banks in some states have been permitted to utilize exchange-traded interest rate and foreign exchange derivatives to hedge interest rate or foreign exchange exposure. In a least one state, banks are permitted to act as FCMs engaging in trading for customers and for their own account in exchange-traded interest rate and foreign exchange derivatives. This activity generally takes place in a bank or non-bank subsidiary.

Additionally, a limited number of state member banks engage in derivative transactions linked to commodities or equities. Some of these transactions are related to traditional bank activities in commodities such as gold and silver, but some state member banks have obtained the approval of their state regulatory authorities for activities

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[269] Bankers Trust, Morgan Guaranty Trust Co., Chemical Bank, and Bank of New York. All are state-chartered in New York.

[270] 12 USC §§ 330, 1831a.

[271] 12 USC §330.

involving a broader array of commodity-linked or equity-linked transactions. State member banks in a limited number of states (notably New York) have been permitted by state regulatory authorities to engage as principals in OTC derivatives for the purposes of hedging exposure created by OTC transactions. Additionally, banks in at least one state have been permitted to trade in commodity- or equity-linked exchange-traded derivatives for the account of customers.

The FED has required state member banks acting as principals in derivatives linked to commodities or securities, that they do not have the authority to purchase and hold directly, to obtain the approval of the FED to continue such activities, unless the transactions are entered into on a perfectly matched basis. State member banks that currently are not engaged in such transactions are required to seek the approval of the FED to commence such activities in the future. The FED is currently reviewing these activities.

The State of New York Banking Department has generally held that derivative activities are closely related to banking and, with certain limitations, are therefore permitted. Banks who wish to newly engage in such activities generally gain approval from the Department on a case-by-case basis.

(3) Foreign Branches of Member Banks

The FED may authorize, with certain exceptions, the foreign branch of a member bank to engage in activities that are usual in connection with the business of banking in the place where the foreign branch will transact business.[272] Generally, a foreign branch of a member bank is permitted to engage in all of the activities authorized under the bank's charter. To the extent permitted under local law, foreign branches of a national bank may engage in the full range of OTC derivative transactions permitted under the bank's charter. Foreign branches of state member banks may also engage in such activities consistent with its charter, subject to the FED's approval with respect to commodity- and equity-linked transactions.

(4) Edge and Agreement Corporations

The FED has the authority to permit Edge and Agreement corporations to engage in activities that are usual in connection with the business of banking in the place where the foreign branch of the corporation will transact business.[273] Domestically, an Edge or Agreement corporation may engage in foreign exchange activities, which may include derivative transactions. Outside of the U.S., such corporations, usually through subsidiaries, may act as FCMs to engage in transactions for the account of customers or for their own account for hedging purposes, and may act as a principal or agent in swap transactions for hedging or trading purposes, subject to the approval of the FED for transactions linked to commodities.

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[272] 12 USC § 604a.

[273] 12 USC § 615(a).

(5) Foreign Subsidiaries of Bank Holding Companies

The activities of bank holding companies subsidiaries established for the purpose of engaging in business overseas are subject to regulation by the FED.[274] As with Edge corporations, foreign subsidiaries of bank holding companies may act as FCMs to engage in transactions in exchange-traded derivatives for the account of customers or for their own account for hedging purposes, and may act as a principal or agent in swap transactions, subject to the approval of the FED for transactions linked to commodities.

(6) Foreign Banking Organizations with Operations in the U.S.

A federal branch of a foreign bank generally may engage in the same derivative activities as a national bank. State-licensed branches or agencies may engage in derivative activities permitted by their state licensing authority, and at least one state has permitted state-chartered banks to engage in a broad range of derivative activities, and has permitted state-licensed branches and agencies to engage in the same activities. Such state-licensed branches and agencies may not engage in any activity that is not permissible for a federal branch unless specifically approved by the FED, and in the case of an insured state branch, the FDIC.[275] The non-banking operations of a foreign banking organization that maintains a branch, agency, or subsidiary bank in the U.S. are subject to the same limitations on derivative activities as U.S. operations of domestic bank holding companies.[276]

c. Office of the Comptroller of the Currency (OCC)

The OCC is the regulator of national banks and their derivative activities. The OCC regulates the derivative activities of national banks who act as both dealers and end-users of derivatives.[277] To the extent that such banks use exchange-traded derivatives, they are subject to certain CFTC and SEC regulation. Certain anti-fraud and anti-manipulation rules of the CFTC and SEC also apply to certain OTC derivatives used by national banks.[278]

The authority of the OCC to regulate the derivative activities of national banks is derived from the OCC's authority to regulate national banks, generally. In addition, the OCC has the express statutory authority to "prescribe rules and regulations to carry out the responsibilities of the office," and to enforce national bank compliance with relevant

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[274] 12 USC § 1843(c)(13).

[275] 12 USC § 3105(h).

[276] 12 USC § 3106(a).

[277] For a discussion on regulation common among the OCC and other banking agencies, see above **Section E.3.a.: General Discussion of the Banking Agencies' Regulation of Derivatives**. For a discussion of the capital standards, see **Section E.4.: Capital Standards**. For information on disclosure and accounting, see **Section E.5.: Accounting Treatment for Financial Derivatives** and **Section E.6.: Disclosure Treatment for Financial Derivatives**.

[278] See **Section E.2.a.: OTC Derivatives**.

statutes and regulation through a wide array of enforcement remedies.[279]

The OCC has emphasized the role of national banks as financial intermediaries in the derivative markets, performing functions that are part of the business of banking related to making loans and taking deposits. National banks and their subsidiaries have been given the authority by the OCC to enter into a wide array of derivative transactions and instruments, both for their own accounts and to accommodate their customers as dealers. A national bank may enter into derivative transactions as principal in order to hedge risk exposures arising from its investment portfolio or non-dealer operations. In addition, a national bank may enter into derivative transactions for its own account as incidental to its authorized dealer-bank trading activities, where the bank may lawfully purchase and sell the underlying instrument or product for its own account. This would include, for example, derivative instruments in U.S. government securities, foreign exchange and bank-eligible precious metals (gold, silver and platinum).

A national bank is also authorized to enter into derivative transactions as an agent, or dealer, for its customers or as principal in transactions where the bank is serving as a financial intermediary for its customers, whether or not the bank has the power to act as principal for its own account with respect to the underlying instrument or product. Thus, for example, the OCC has permitted national banks to establish operating subsidiaries that function as Futures Commission Merchants (FCMs) by soliciting, accepting, and executing customer orders for futures and options. The OCC has also permitted national banks to enter into matched and unmatched commodity price index swap transactions in order to assist their customers in limiting certain financial risks resulting from fluctuations in commodity prices, and to hedge such transactions on a portfolio basis.[280]

The OCC has also permitted national banks to hedge a financial exposure arising from otherwise permissible activities in markets that involve physical delivery of commodities and that, in connection with such hedging activities, a national bank may make or take physical delivery of commodities, transfer or receive transfer of documents of title, and engage in other incidental activities.[281] This activity is described further in OCC Banking Circular 277 released on October 27, 1993. The OCC stipulated, however, that only a nominal percentage of hedging transactions should actually be physically settled, and that such physical hedging transactions must be customer driven. The OCC further stipulated that a national bank may not use physical hedging transactions as a means to speculate in commodity price movements. Any national bank who wishes to engage in physical hedging activities must obtain prior written authorization of the OCC.

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[279] 12 USC 93a and 1818.

[280] See OCC No-Objection Letter No. 87-5 regarding matched commodity swap transactions and OCC No-Objection Letter 90-1 regarding unmatched commodity swap transactions. The letters are written in response to requests made by Chase Manhattan Bank. In finding such transactions to be permissible for national banks, the OCC recognized that "a swap contract in which payments are based on commodity prices instead of interest rate or currency exchange rates fits within the powers of national banks because it is simply a new way of tailoring traditional intermediation services of commercial banks to meet the needs of bank customers." The OCC concluded from these letters that a national bank may use futures contracts, options and similar OTC instruments which are cash settled to hedge commodities price risk resulting from unmatched swaps and that the use of such instruments as hedges may be on a portfolio basis.

[281] See No-Objection Letter dated June 30, 1993. The NY State banking department had already approved the bank's engagement in the activities.

In general, national banks are permitted to use derivative products so long as the activities are consistent with the bank's policies and procedures, and safe and sound banking practices.

Written policies and procedures used in the examination process differ depending upon whether the institution being examined is involved in the derivative markets as a dealer, as an end-user, or both.

The primary resource for supervision of dealer activities is the Chief's Office Source Book. The rapidly changing nature of the derivative markets results in new products and changes in existing products on a continuous basis. However, the basic management concepts of accurate risk measurement system, proper revaluation techniques, appropriate reporting lines, meaningful risk limits, and sound policies apply to all derivative trading activities. The Source Book also addresses back-office controls.

The primary resources for evaluating end-user activities are the Chief's Office Source Book and Comptroller's Handbook for National Bank Examiners.

According to the OCC, three resources provide guidance for examining derivative activities at dealer and end-user institutions.

- OCC Banking Circular 277 issued on October 27, 1993, replaced Banking Circular 79 (3rd Rev.). Circular 277 sets forth the policies and procedures required of national banks that engage in financial derivative activities in both a dealer and an end-user capacity. Circular 277 states that national banks may use these contracts to reduce undesirable exposures to factors such as interest rate changes or currency fluctuations, to obtain the lowest cost funding alternatives, to take advantage of arbitrage opportunities across financial markets. Banks may also offer financial derivatives to customers seeking risk management tools to assist in meeting business objectives. The circular encourages national banks to use derivatives for such purposes. Banks are to enter into derivative transactions in accordance with safe and sound banking practices. The circular provides requirements regarding (a) senior management and board oversight; (b) market risk management; (c) credit risk management, including a credit approval function requiring a bank to analyze the impact of proposed derivative activities on the financial condition of the customer; (d) liquidity risk management; (e) operations and systems risk management; (f) legal issues; (g) capital adequacy; and (h) accounting.

- OCC Banking Circular 228 outlines supervisory policies for mortgage derivative products and stipulates that securities trading activities (including trading in mortgage derivative instruments) should only be conducted in a closely supervised trading account by banks with strong capital and earnings and adequate liquidity.

- The Comptroller's Handbook for National Bank Examiners, Section 203 - Investment Securities, provides general examination guidelines for banks using futures, forwards, and options in trading activities and for risk management purposes. Specifically, the OCC requires that banks' risk management systems include:

▸ Board-approved policies that outline the derivative activities in which the bank may engage and board-approved limits which specify the maximum amount of earnings or capital that may be put at risk. Those policies and limits should distinguish between trading activities and positions established for risk management purposes.

▸ Risk measurement and limit systems that enable the bank to adequately identify and correctly quantify the level of risk associated with its trading and non-trading activities, and procedures to ensure adherence to policies and limits.

▸ Timely and accurate reports on the level of risk that the bank is taking and on the bank's adherence to limits and policies.

In general, the OCC evaluates both the bank's policies and procedures in the area of risk management and the appropriateness and adequacy of its risk measurement and monitoring systems (e.g., net income and market value simulation analyses, trading risk measurement systems and controls and, for some community and regional banks, gap analysis.)

On September 27, 1993, the OCC called for the creation of an interagency task force to address the involvement of U.S. banks in financial derivative products.[282]

OCC bank examiners receive training and guidance with respect to off-balance sheet activities through courses in bank supervision, which address derivatives in addition to other instruments and activities. Additionally, the OCC has a cadre of examiners who specialize in examining capital markets activities of bank, including off-balance sheet activities. This group receives specialized training on an ongoing basis. Each specialist also receives a quarterly Capital Markets Newsletter published by the OCC's Chief National Bank Examiner's office. The newsletter often includes feature articles on derivatives.

d. The Federal Deposit Insurance Corporation (FDIC)

The FDIC is the primary federal regulator of state non-member banks and their derivative activities.[283] To the extent that such banks use exchange-traded derivatives, they are subject to certain CFTC and SEC regulation. Certain anti-fraud and anti-manipulation rules of the CFTC and SEC also apply to certain OTC derivatives used by state non-member banks.[284] In general, the FDIC also has authority for derivatives in both the open and closed bank context.

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[282] Office of the Comptroller of the Currency, News Release #93-106, September 27, 1993.

[283] For a discussion on regulation common among the FDIC and other banking agencies, see above Section E.3.a: General Discussion of the Banking Agencies' Regulation of Derivatives. For a discussion of the capital standards, see Section E.4.: Capital Standards. For information on disclosure and accounting, see Section E.5.: Accounting Treatment for Financial Derivatives and Section E.6.: Disclosure Treatment for Financial Derivatives.

[284] See Section E.2.a.: OTC Derivatives.

The FDIC's authority over derivative transactions can be found in several places in the FDI Act and its implementing regulations.

For open banks, the FDIC can regulate derivative transactions pursuant to its general authority to assure that banks do not engage in unsafe or unsound practices.[285] More specifically, Appendix A to the FDIC's Capital Maintenance regulation discusses the effect that the netting of certain derivatives may have on a bank's risk-based capital computation.[286]

In the closed bank context,[287] Section 11(e)(8) of the FDI Act defines the term "Qualified Financial Contract" (QFCs) and sets forth certain parameters for handling QFCs when the FDIC is appointed receiver. The FDIC Board of Directors issued a Statement of Policy on Qualified Financial Contracts dated December 12, 1989 interpreting this section of the FDI Act.[288]

The FDIC is the primary federal regulator of state non-member banks and their derivative activities. The state banks are chartered under state law and must have authority under their state charters to engage in derivative transactions. According to industry sources, no state non-member banks are currently dealers in derivatives, and therefore act only as end-users. High credit rating and sophistication requirements limit the banks and other firms who act as dealers.

According to the FDIC, state non-member banks use derivatives primarily in the context of hedging and portfolio management strategy. Even though, aside from individual state statutes, there are no legal prohibitions on speculation and trading in derivatives for a state non-member bank's own account, the size and technical expertise of such institutions generally make these derivative activities impractical. Relative to the money center banks, the use of derivatives by state non-member banks is comparatively slight. Also according to the FDIC, state non-member banks are also unlikely to be active in the utilization of derivative instruments on behalf of customers as dealers. Customers sufficiently large and sophisticated enough to be involved in such activity would generally transact such business with larger institutions.

Section 24 of the FDI Act[289] regulates the permissible activities of state banks by utilizing the same standards that apply to national banks. Prior to the enactment of Section 24, a state bank's powers were controlled primarily by state law and the Glass-Steagall Act. Section 24 does contain a grandfather provision for certain activities which the bank was conducting prior to its enactment. Under Section 24, certain types of

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[285] FDI Act § 8(b), 12 USC § 1818(b).

[286] 12 CFR 325, Appendix A, § II(E).

[287] For a more detailed discussion of the closed bank procedure, see Question #12 posed to the regulators by Representative Leach.

[288] FDIC Law, Regulations & Related Acts, volume 2, p. 5113. Sections 11(e)(1) and 13(e) of the FDI Act, the FDIC Board's March 23, 1993 "Statement of Policy Regarding Treatment of Security Interests After Appointment of the Federal Deposit Insurance Corporation As Conservator Or Receiver", and FDIC Legal Division Staff Advisory Opinion 89-48 may also be relevant to any discussion of the FDIC's authority to regulate derivative transactions.

[289] 12 USC §1831a.

"investments" are prohibited for state non-member banks. For example, state banks are generally not permitted to invest in equity securities.[290] This prohibition, according to the FDIC, would appear to include stock options. With regard to the purchasing of commodity futures for its own account, it is unclear, according to the FDIC, whether or not this is a permissible activity. A transaction which violates a criminal statute, an applicable state statute, is inherently unsafe and unsound, or violates Section 30 of the FDI act pertaining to Adverse Contracts, would be prohibited.

The overall financial condition of the individual institution is important in that otherwise sound, well-capitalized and appropriately managed institutions are generally allowed to engage in derivative activities outside of a risk reduction strategy. The financial strength, size, liquidity and internal control environment of the institution will further determine the extent to which involvement in derivative activities is acceptable. Institutions with more modest capital levels, for example, could be discouraged on safety and soundness grounds from taking the same level of unmatched positions.

Even if an individual institution is financially capable and is attempting to use these instruments as part of a risk reduction strategy, the FDIC could determine that involvement in derivative product activities would be "unsafe and unsound" based entirely on the specific technical inability of existing management. This could be the case even in institutions which are in other respects considered appropriately managed, or where present management is already engaged in a more limited use of certain derivatives.

The FDIC has allocated substantial resources to selecting and training individuals to for examine and supervise capital markets activities. The training of specialists is ongoing. Semiannual seminars are conducted covering topical and emerging issues in an attempt of evolve with the market. Training of other examiners and appropriate Regional Office personnel is then periodically conducted by the capital markets specialists within the Regions. Additionally, the FDIC regularly compiles and internally produces reports on capital markets activities. The written policies and procedures are presently embodied in the Capital Markets Reference Manual.

e. Office of Thrift Supervision (OTS)

The OTS has authority over the use of derivatives by thrifts. Thrifts are end-users of derivatives and do not act as dealers. Thrifts that use derivatives are expected by the OTS to use them to reduce risk. OTS rules for futures require that institutions enter only into interest-rate related contracts, and use such futures only to reduce interest rate risk. Institutions are not permitted to enter into futures contracts for purposes other than interest rate risk reduction. Similarly, options contracts are to be used only to reduce interest rate risk. The OTS does not have specific regulations governing the use of swaps by thrifts. However, the OTS Regulatory Handbook: Thrift Activities directs that management monitor the correlation of swap positions with the assets and liabilities being hedged. To the extent that thrifts use exchange-traded derivatives, they are subject to certain CFTC and SEC regulation. Certain anti-fraud and anti-manipulation rules of the CFTC and SEC also apply to certain OTC derivatives

[290] See FDI Act §24; 12 CFR 362, and FDI Act §18(1).

used by thrifts.[291]

Specifically, the OTS stated that in exercising its authority, it has taken a number of initiatives with respect to the prudent use of derivatives by thrifts which are governed by the following principles:[292]

- The risk of derivatives should be viewed in terms of their contribution to the overall risk of an institution's portfolio, not in terms of their riskiness on a stand-alone basis. It is the contribution to an institution's risk, not the risk of the instrument itself, that ultimately matters.

- Effective risk management minimizes problems related to the use of derivatives. Institutions should not use derivatives unless they understand the instruments and establish effective systems for monitoring and controlling their use.

- The use of derivatives should be strictly limited to risk reducing activities.

- The risk-based capital framework should be modified to provide incentives to control interest rate risk. At present, the risk-based capital requirements focus solely on credit risk and, therefore, may provide an incentive for institutions to substitute interest rate risk for credit risk. To be effective, capital requirements must distinguish among institutions with different levels of interest rate risk exposure.

- Unnecessary regulatory impediments to the use of derivatives should be avoided so as not to discourage qualified institutions from using these products to reduce risk. (Some bank and thrift executives contend that they do not use derivatives to hedge risk exposures because they fear that any institution that uses these products will receive increased regulatory scrutiny.)

The OTS has what they call a three-part program for the regulation of derivatives.

(1) On-Site Examinations

Each regional OTS office has examiners and supervisory staff with specialized expertise in derivative instruments and interest rate risk. These specialists, along with the OTS' Risk Management staff in Washington, DC are available to provide assistance to examiners as needed.

Extensive training is offered to examiners on derivatives, interest rate risk, and asset/liability management. Such training incudes the new Thrift Regulator School, and training on financial instruments, futures, risk management, advanced capital markets, and advanced examiner topics.

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[291] See Section E.2.a.: OTC Derivatives.

[292] Office of Thrift Supervision responses to questions raised by Senator Riegle on derivative products in a report entitled Derivative Product Activities of Savings Associations dated March 1993.

The examiners determine: (a) whether the institution complies with OTS policies with respect to control of interest rate risk; (b) whether the institution complies with OTS policies and regulations on futures, options, and mortgage derivative products; (c) management competence regarding derivative products; and (d) whether corrective action is necessary.

(2) Off-Site Surveillance and Monitoring

OTS developed a relatively sophisticated computer model which it began using in early 1991 to measure and monitor the interest rate risk exposure of individual thrifts and the industry as a whole. In March 1993, the OTS introduced a new version of the model based on a new reporting form Schedule CMR. OTS uses the model to generate Interest Rate Risk Exposure Reports for examiners and for each institution's use. The Exposure Reports contain detailed estimates of the interest rate sensitivity of an institutions's assets, liabilities, and off-balance sheet contracts over nine different interest rate scenarios.

With the new schedule CMR, thrifts report detailed information on their derivatives including interest rate swaps, caps, floors, futures, options on futures, and mortgage derivatives.

A new coding system facilitates the reporting of derivatives. All off-balance sheet derivatives are identified by a four digit contract code. Institutions also report the notional amount of the contract rate, margins, or fees. This system will accommodate new varieties of derivatives as they are developed.[293]

(3) Prudential Rules and Regulations

OTS regulations and policy statements that govern the use of derivatives include: (A) the risk-based capital requirements; (b) Thrift Bulletin 13, a policy statement on interest rate risk; (c) Thrift Bulletin 52, a policy statement on mortgage derivative products; and (d) OTS regulations for futures and options.

The risk-based capital standards used by the OTS are also used by the Federal Reserve, OCC, and FDIC.[294] Currently, the risk associated with derivatives is accounted for in the bank and thrift capital standards by assessing the current credit risk exposure plus an add-on for future exposure based upon 0-5% of the notional amount. The current credit exposure (due to the risk that a counterparty will default) is measured as "replacement cost" which is the cost to an institution to replace a contract on which a counterparty has defaulted. The replacement cost plus the add-on is referred to as the "credit equivalent amount" which is then multiplied by up to 50% to arrive at the risk-based capital charge.

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[293] For further information on disclosure and accounting, see Section E.5.: Accounting Treatment for Financial Derivatives and Section E.6.: Disclosure Treatmeat for Financial Derivatives.

[294] For a more detailed discussion of the capital standards, see Section E.4.: Capital Standards.

The OTS recently revised its risk-based capital rule to take account of interest rate risk, including the interest rate risk and risk reduction associated with financial derivatives. The new rule is effective on January 1, 1994. Under the revised rule, institutions with "above normal" levels of interest rate risk will be subject to an interest rate risk capital component. OTS developed a model to estimate the interest rate risk exposure of savings associations. The results of that model will be used by OTS to determine how much capital, if any, an association will be required to hold for interest rate risk, including interest rate risk associated with derivatives.

Thrift Bulletin 13 was issued in 1989 and advises institutions to set interest rate risk exposure limits and describes interest rate risk management procedures which the OTS expects institutions to utilize. OTS requires any institution with $500 million or more in assets and any institution that holds "high risk" mortgage products to have an interest rate risk measurement system. The measurement system must be capable of measuring the effect of changes in interest rate on the institution's net interest income and Market Value of Portfolio Equity (MVPE). The emphasis on MVPE ensures that the analysis is conducted in a portfolio context and that all financial derivative products are taken into account.

Thrift Bulletin 52 governs investments by thrifts in mortgage derivative products. The Bulletin sets a test to determine the riskiness of a mortgage derivative and states that the thrift must demonstrate that the derivative will reduce overall risk of the thrift.

OTS restricts the use of futures contracts by thrifts to activities that will reduce interest rate risk. Thrifts are also restricted in their choice of counterparty for options and must hold capital for counterparty risk on all OTC options that are in-the-money. Additionally, thrifts are directed to develop appropriate management and control policies for futures and options use, and must notify their regional OTS office before they begin a futures or options program.

f. Securities and Exchange Commission (SEC)

The SEC has jurisdiction over the securities activities of broker-dealers, in the capacity of both a dealer and an end user. In general, the SEC has jurisdiction over those derivatives which are considered a "security" under Section 3(a)(10) of the SEC Act of 1934. The SEC also has jurisdiction over certain exchange-traded derivative products which are traded on SEC-regulated exchanges.[295] The SEC was given authority under Section 9 of the Securities Exchange Act of 1934 to approve options trading through rulemaking. Since 1934, the SEC has regulated trading in stock options and other securities-based derivative products. These products include both standardized options, such as those traded on five national exchanges, and derivatives offered by corporate issuers, such as warrants, rights, and various convertible securities. Options on securities and futures and commodity options contracts are regulated by the CFTC.

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[295] Including the New York Stock Exchange, the American Stock Exchange, the Pacific Stock Exchange, and the Philadelphia Stock Exchange.

Exchange trading of derivative securities began in 1973 when the SEC authorized the listing and trading of standardized options contracts on the Chicago Board of Options Exchange. Later, trading was authorized on several other exchanges, including the New York Stock Exchange, the American Stock Exchange, the Philadelphia Stock Exchange, and the Pacific Stock Exchange. The SEC, together with these exchanges and the National Association of Securities Dealers, Inc. (NASD), has created a special regulatory structure for derivative securities.[296] As part of its on-going review of derivative activities, the SEC produced a study of the options markets in 1978 that led to future regulatory developments.

Since 1983, Section 2(a)(1)(B) of the CEA and related securities laws have divided jurisdiction between the SEC and the CFTC.[297] Pursuant to this Section, the SEC has jurisdiction over securities, including options on securities (including exempted securities), options on certificates of deposit, options on stock indexes, and options on foreign currency traded on a national securities exchange; the CFTC has jurisdiction over all futures contracts, including futures contracts on stock indices,[298] options on futures contracts and physical commodities and foreign currencies. There is no trading in futures on individual securities.

The SEC has in place a securities regulatory structure under the Exchange Act that encompasses derivative activities within its jurisdiction. This regulatory system is comprised of four essential components:

(1) Rules Against Fraud and Manipulation

The SEC has specific statutory authority under the anti-fraud provisions of the federal securities laws to adopt and enforce rules that prohibit market manipulation, insider trading, and abusive securities trading or sales practices.

(2) Broker-Dealer Regulation

Securities firms use derivatives in the capacity of both a dealer and an end-user. As an end-user, securities firms can use derivatives to manage risks associated with the activities of the entire firm. Whether the derivative activity is conducted inside or outside an unregistered (not registered with the SEC) affiliate depends upon, among other things, the legal requirements of the derivative instrument being used and the capital charge associated with the transaction.

The SEC has not issued a rule which specifies which derivative instruments are

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[296] The exchanges and the NASD together are self-regulatory organizations (SROs).

[297] The Johnson-Shad Accord regarding this jurisdiction was passed into law by the Congress as part of both the Securities Acts Amendments of 1982 and the Futures Trading Act of 1982. See P.L. No. 97-303, 96 Stat. 1409 (1982) and 97-444, 96 Stat. 2294 (1982).

[298] In passing the Johnson-Shad Accord into law, Congress added a provision that provided the SEC with a special consultative and concurrent role in the approval process concerning stock index futures contracts. In particular, the SEC must find that the specific stock index futures contract is cash-settled, not readily susceptible to manipulation, and reflects a substantial segment of the underlying cash market. Futures contracts on individual securities, other than exempted securities, were prohibited.

securities and which instruments are not securities. However, the SEC issued a concept release on May 4, 1993 which seeks comment on the appropriate net capital treatment of various OTC derivative instruments, including OTC swaps, forwards, futures, and options.[299]

Broker-dealers that conduct any derivative activity in the U.S. involving securities are required to be registered as broker-dealers with the SEC and to be members of one or more SROs, such as the NASD, the New York Stock Exchange, and the other national exchanges on which derivative securities are traded. The SROs promulgate and enforce rules governing broker-dealer sales practices. Under these rules, broker-dealers have a duty to provide their customers with best execution of their orders, and to make suitability determinations before recommending customer trades. Derivative activities interpreted by securities firms to be securities activities, and therefore conducted in a registered broker-dealer, include exchange-traded options on securities, exchange-traded options on indices of securities, exchange-traded options on foreign currency, and OTC equity index options.

Broker-dealers are subject to SEC rules governing financial responsibility that are designed to protect their integrity and financial stability. These rules include the SEC's recordkeeping and reporting rules[300] and the Net Capital Rule.[301] The Net Capital Rule, according to the SEC, plays a significant role in the maintenance of fair and orderly markets in the U.S. by ensuring that broker-dealers maintain sufficient net, liquid assets that enable them to satisfy promptly their obligations to customers and other broker-dealers. These assets also provide a cushion against potential market and credit risk. The Net Capital Rule's existing structure was developed in large measure prior to the recent growth and development of the OTC derivatives market. Under the Net Capital Rule, the unrealized profit associated with an OTC derivative, generally, is treated as an unsecured receivable subject to a 100% capital charge. In light of the development of the OTC derivative markets and the trend among dealers to conduct OTC derivatives not involving securities in unregistered entities, either in the U.S. or abroad or in DPCs, the SEC has commenced a formal review of its capital requirements. On May 4, 1993, the SEC issued its Concept Release[302] requesting comments on the treatment of derivative products under the Net Capital Rule in order to, among other things, make it more feasible for firms to conduct such activities in registered broker-dealers.

Securities firms who currently deal in derivatives conduct many of their derivative dealing activities in unregistered (not registered with the SEC) affiliates or in offshore affiliates, not subject to the SEC's Net Capital Rule. The treatment of such derivatives under the Net Capital Rule is a primary reason such activities have been moved to unregistered affiliates. The derivative dealing activities conducted in an unregistered affiliate are those activities interpreted by the securities firm not to be securities activities. The derivative activities typically considered by securities firms not to be

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[299] SEC Concept Release No. 43-32256, International Series Release No. 540, 58 FR 2786. See also Section E.4.b.(1): Current and Proposed Capital Standards. See also Question #26 posed to the SEC by Rep. Leach.

[300] 17 CFR § 240.17a-3.

[301] 17 CFR § 240.15c3-1. For a more detailed discussion of the capital standards, see Section E.4.: Capital Standards.

[302] SEC Release No. 32256 (May 4, 1992); 58 FR 2786.

securities activities include the dealing of most swaps, primarily interest rate and currency swaps, and certain other OTC derivative instruments.

The SEC monitors the risks posed by the activities of unregistered affiliates through its risk assessment program. Specifically, pursuant to the Market Reform Act of 1990,[303] the SEC adopted risk assessment recordkeeping and reporting rules[304] that provide the SEC with an overview, on a periodic basis, of the financial and securities activities of affiliates that are likely to have a material impact on the broker-dealer's financial and operational condition.[305] Under the risk assessment rules, broker-dealers are required to file information concerning the financial and securities activities of such affiliates. In addition, broker-dealers are required to make and keep records concerning their policies, procedures, and systems for monitoring and controlling financial and operational risks resulting from the activities of their affiliates. The SEC presently is analyzing quarterly filing information obtained from approximately 250 securities firms.

(3) Regulation of the Markets

A special regulatory regime has been developed for securities that are traded on national securities exchanges. These rules are designed to maintain fair and orderly markets, while facilitating market competition and efficiency. Exchange trading provides certain safeguards, including transparency in the form of real time quotation and price reporting, margin requirements,[306] position limits, limitations on market concentration, audit trail requirements, and circuit breakers designed to control extreme market shifts. Some OTC markets, such as the NASD's automated quotation system (NASDAQ), provide many of the same protections. These markets are also subject to surveillance systems that enhance the ability of the SROs to examine and enforce SEC and SRO customer protection rules.

Systems also have been established to ensure efficient and accurate clearance and settlement of trades. Options transactions effected on a national exchange are cleared and settled in a continuous net settlement system operated by the Options Clearing Corporation. This system significantly reduces counterparty risk through the presence of a financially stable contractual intermediary that interposes itself as the counterparty to both sides of any transaction.

Margin requirements[307] further contribute to the maintenance of fair and orderly markets. First, margin serves to prevent investors from entering into highly leveraged positions and incurring obligations which they will be unable to satisfy in the event of a

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[303] P.L. 101-432, 104 Stat. 978.

[304] 17 CFR §§ 240.17h-2T. See Securities Exchange Act Release No. 30929 (July 16, 1992), 57 FR 32159.

[305] 17 CFR §§240.17h-1T and 240.17h-2T. See Securities Exchange Act Release No. 30929 (July 16, 1992), 57 FR 32159.

[306] In 1983, the authority to review margins for options on securities was delegated to the SEC by the Board of Governors of the Federal Reserve Board. In 1985, the SEC, in conjunction with the national exchanges on which options are traded and the NASD, established a uniform, premium-based customer margin system for "short" options positions that sets appropriate margin levels consistent with market conditions.

[307] For a more detailed discussion of margin requirements, see Section E.3.g.: Commodity Futures Trading Commission.

substantial market decline. Secondly, margin protects the capital of broker-dealers and clearing firms by reducing the risk that their capital will be called upon to satisfy the obligations of overly-leveraged investors. Finally, margin also serves to minimize systemic risk to the entire financial system during periods when markets are under stress, and when defaults by otherwise highly-leveraged participants would pull liquidity out of the system at a time when it is under the most stress.

(4) Special Customer Protection Rules

Broker-dealers effecting transactions in securities that pose special risks to investors, whether such securities are traded on an exchange or in the OTC market, are subject to additional requirements under the federal securities laws, including sales practice requirements intended to protect investors and provide them with information about investment risk. In options transactions, broker-dealers are required to follow certain SRO rules governing account opening procedures. Among other things, they are required to exercise due diligence in ascertaining customer suitability for options trading, particularly before recommending options trades or trading strategies. Broker-dealers are also required, pursuant to Rule 9b-1 under the Exchange Act[308] and Form S-20 under the Securities Act of 1933,[309] to provide options customers with a risk disclosure document containing information describing the mechanics and risks of options trading, transactions costs, margin requirements, and the tax consequences of margin trading. SRO rules also impose special qualification and testing requirements for broker-dealer sales personnel and their supervisors who effect options transactions.

g. Commodity Futures Trading Commission (CFTC)

Those entities that utilize certain exchange-traded derivatives are subject to CFTC rules and regulations, in addition to the entities' primary regulator.[310] The CFTC, in general, regulates the trading of futures contracts and commodity options.

Futures and options transactions are widely used by producers, speculators, dealers, financial institutions, collective investment vehicles, and other users of underlying commodity interests. The regulatory framework established by the CEA and the CFTC regulations addresses market integrity, financial integrity, and customer protection. The CEA and the CFTC regulations[311] regulate the futures and commodity option exchanges and their clearing facilities, the design of products traded, and the persons soliciting or handling transactions for customers.

The futures regulatory framework was designed to assure that all futures transactions would take place on regulated exchange markets through regulated

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[308] 17 CFR § 240.9b-1.

[309] 17 CFR § 239.20.

[310] For further information on CFTC regulation, see above Section B.2.b.: Exchange-Traded Derivatives.

[311] 17 CFR §1 et seq.

intermediaries registered as futures commission merchants (FCMs) and subject to minimum capital and other requirements. The CFTC stated that while in general exchange trading requirement has worked well to strengthen self-regulation, protection of customers, and market integrity, not every transaction can or should take place on the exchange floor. Several years of debate on this issue culminated in the adoption of the Futures Trading Practices Act of 1992 (CEA § 4(c)) which authorized the CFTC to grant exemptions to the exchange trading requirement. Largely in response to Congressional directives, the CFTC has issued exemptive orders for certain futures including swaps, hybrids, and certain energy contracts.[312] While the CFTC has retained some residual anti-fraud and anti-manipulation authority for some of these exempt instruments, these instruments are not subject to the same regulation by the CFTC as exchange-traded futures contracts.

Transactions in commodity futures contracts must occur only on or subject to the rules of exchanges, which have been designated by the CFTC as contract markets and which are subject to CFTC oversight. Under the CEA, an exchange must obtain a designation from the CFTC for every commodity it wishes to trade and must meet standards in the CEA and CFTC regulations to obtain and maintain that designation.[313] Exchanges must submit all exchange rules to the CFTC for review.[314] CFTC authority over exchange rules involving trading or contract terms and conditions extends to the power to alter or amend exchange rules.[315]

Since 1983, Section 2(a)(1)(B) of the CEA and related securities laws have divided jurisdiction between the SEC and the CFTC.[316] Pursuant to the CEA, the SEC has jurisdiction over securities, including options on securities (which include exempted securities), options on certificates of deposit, options on stock indexes, and options on foreign currency traded on a national securities exchange; the CFTC has jurisdiction over all futures contracts, including futures contracts on stock indices, and options on futures contracts and physical commodities and foreign currencies. There is no trading in futures on individual securities.

The federal regulatory scheme extends beyond the designated contract markets by requiring that every person and firm that handles the funds or orders of customers or who advise customers on whether to buy or sell futures contracts must be registered. Registration requires that every commodity brokerage firm or Futures Commission Merchant, Introducing Broker, Commodity Trading Adviser, Commodity Pool Operator, Floor Broker, and as of 1993 every Floor Trader as defined in the CEA and where applicable their principals, demonstrate fitness to act as industry professionals. For example, persons and firms could be deemed unfit if they have been convicted of serious crimes, including crimes involving fraud. Most of the registration process has been

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[312] See discussion of regulation of OTC derivatives in above Section E.2.a.: OTC Derivatives.

[313] CEA §§ 5 and 5a.

[314] CEA § 5a.

[315] CEA § 8a(7).

[316] The Johnson-Shad Accord was passed into law by the Congress as part of both the Securities Acts Amendments of 1982 and the Futures Trading Act of 1982. See P.L. No. 97-303, 96 Stat. 1409 (1982) and 97-444, 96 Stat. 2294 (1982).

delegated to the National Futures Association (NFA).

Commodity professionals are subject to requirements relating to registration, the protection of customer funds, minimum capital,[317] recordkeeping, disclosure, and reporting. The CFTC's capital rule defers to the SEC's haircut proprietary positions in securities to reflect the market risk in such positions, and to the SEC's minimum capital requirement and calculation methodology if securities brokerage is a given firm's dominant line of business. The combined efforts of federal and self-regulation are evidenced by an extensive program to protect market integrity through the use of CFTC or exchange limits on the size of speculative positions in contracts where large speculative positions would raise concerns. Additionally, CFTC and exchange surveillance systems constantly monitor market activity. In that regard, the CFTC requires large traders, whether commercial or non-commercial, to file reports on their positions. The CFTC can issue special calls for additional information from market participants.

Customer funds are protected by CFTC requirements that all customer funds must be segregated an held in a separate account by clearing members and FCMs apart from the member firm's own funds.[318] Additionally, to protect customer's segregated funds, the CFTC sets minimum net capital financial requirements for all firms and persons who handle customer funds.[319] Additionally, compliance is monitored through requiring annual certified audits by independent public accountants, by direct audits by the exchanges and the NFA, and by CFTC oversight audits.

The CFTC oversight audits are part of the CFTC's rule enforcement review program which reviews the performance of SROs in the enforcement of their rules. The rule enforcement review is an extensive program covering not only SRO financial audit programs, but the sales practices, trading, and market surveillance programs of the SROs as well.

The CEA contains broad anti-fraud and anti-manipulation provisions; requires reporting and recordkeeping by exchanges; and prohibits noncompetitive trading practices such as fictitious sales. The CFTC is authorized to take administrative law enforcement actions before its administrative law judges and to take injunctive actions in federal court. The most heavily used sections of the CEA to protect customers through enforcement actions or private lawsuits are the anti-fraud provisions.[320] A primary concern about futures markets has been the potential manipulation of these markets and the effects of such manipulation on the prices of commodities in the cash markets. The anti-manipulation provisions of the CEA remain a central part of the CEA and serve to re-enforce the extensive reporting, surveillance and speculative limit provisions.[321]

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[317] For a more detailed discussion of the capital standards, see Section E.4.: Capital Standards.

[318] CEA § 4d, 17 CFR 1.20

[319] 17 CFR 1.17

[320] CEA §§ 4b, 4o.

[321] CEA § 9(a).

Margin Requirements: Exchanges and clearinghouses set margins, subject to limited oversight, which guarantee performance. Under Section 8a(9) of the CEA, the CFTC has broad emergency powers applicable to all futures contracts "to direct the contract market, whenever it has reason to believe that an emergency exists, to take such action as in the CFTC's judgement is necessary to maintain or restore orderly trading in or liquidation of any futures contract, including, but not limited to, the setting of temporary emergency margin levels on any futures contract..." The CFTC also has plenary authority over options margin systems for exchange-traded options subject to CFTC jurisdiction.

In addition, the Futures Trading Practices Act of 1992 amended the CEA to provide, among other things, the review by the FED of contract market rules establishing or changing the levels of initial and maintenance margins for stock index futures contracts or options thereon. The amendment requires filing of such rules with the Board and specifies that the FED may request or direct the contract market to set margin levels "appropriate to preserve the financial integrity of the contract market or its clearing system or to prevent systemic risk." On March 22, 1993, the Board delegated to the CFTC its day-to-day stock index margin authority under the provision of the Act. The FED has reserved the right to exercise its authority in emergency circumstances such as a market disruption. In relegating this authority to the CFTC, the FED observed that stock index futures and margin levels should be reviewed in the context of other safeguards, such as frequent mark-to-market of positions, standby liquidity arrangements, participant audits, market surveillance, active risk management, and other parts of the overall risk control system employed by the exchange and its clearing system.

When entering into a futures transaction or selling an option, counterparties must post an initial margin requirement with the exchange. At the end of each day, the position must be marked to market with gains or losses added to or subtracted from the counterparties' margin accounts. The balance in a margin account cannot fall below the maintenance margin, which typically corresponds to a contract's maximum allowable daily price movement. Should the position fall below the maintenance margin, the counterparty must put up additional collateral known as variation margin. On the other hand, if the position increases in value, the counterparty may withdraw the excess margin. For traders that have positions in a variety of futures and cash instruments, margin can be determined on a portfolio basis.

Margin serves to prevent investors from entering into highly leveraged positions and incurring obligations which they will be unable to satisfy in the event of a substantial market decline. Margin protects the capital of broker-dealers and clearing firms by reducing the risk that their capital will be called upon to satisfy the obligations of overly-leveraged investors. Margin also serves to minimize systemic risk to the entire financial system during periods when markets are under stress and when defaults by otherwise highly-leveraged participants would pull liquidity out of the system at a time when it is under the most stress.

The CFTC's margin review standard adheres to the principles espoused in a report issued by the Presidential Working Group on Financial Markets in 1988. The Working Group is comprised of the chairpersons of the FED, SEC, CFTC, and the Secretary of the Treasury.

In the report, the Working Group concluded:

- Maintenance margin levels, as opposed to initial margin levels, are the appropriate levels to examine in assessing systemic risk;

- The crucial purpose of maintenance or prudential margin levels is to maintain financial integrity by protecting broker-dealers, FCMs, and clearing corporations from investor and trader default;

- Prudential margin levels do not have to cover all possible price movements, but instead the vast majority of historical one-day price movements;

- The exchange-mandated margin levels are minimums only, and financial intermediaries typically require an amount in excess of these minimums;

- The maintenance margin level for carrying an individual stock should be significantly higher than the level for a stock index futures contract, since an index has a smaller price variability and the payment period for futures margins is shorter than that for stocks;

- Harmonious or consistent margins across cash and futures markets do not imply equal margins, rather, futures margins are consistent with much higher margins in the cash market; and

- Mechanisms other than margins to enhance the stability of the clearance and settlement systems should be considered in an evaluation of protection to the financial system.

Therefore, the CFTC currently has nonemergency margin authority only with respect to stock index futures and options there-on. **See Table 3** for details the minimum maintenance margin requirements for all stock index futures contracts as of September 30, 1993. For instance, the maintenance margin for the CME S&P 500 stock index futures contract is $8,000 per contract, which, according to the CFTC, has been more than enough to cover all of the daily changes in the value of that contact of the most recent six-month and two-year periods.

Current minimum maintenance margin levels for all stock index futures traded on U.S. exchanges would have covered at least 97% of changes in price and contract value over the previous six-month period ending August 31, 1993. Thus, according to the CFTC, these levels meet the criteria of covering "the vast majority" of historical one-day price movements as asserted by the Working Group.

Additional components of a comprehensive risk management system are instituted by four types of entities: the clearinghouses, exchanges, FCMs, and the CFTC. Clearing houses in general have established safeguards such as frequent marking-to-market (at least daily, as well as intraday) paying out as well as collecting settlement variation margin, next day settlement, the ability to change margin levels on short notice and for specific participants and customers, portfolio- and cross-margining systems, standby liquidity arrangements, surveillance, membership and capital requirements, parent guarantees, excess margin, and pledged assets. The exchanges have market and financial

Table 3

MINIMUM MAINTENANCE MARGINS REQUIRED TO COVER
DAILY FUTURES PRICE MOVEMENTS FOR
PREVIOUS SIX- AND TWELVE-MONTH PERIODS[1/]
ENDING SEPTEMBER 30, 1993

STOCK INDEX FUTURES CONTRACT	MAINTENANCE MARGIN LEVEL[2/]	SIX-MONTH IMPLIED EXPOSURE LEVEL[3/]	TWELVE-MONTH IMPLIED EXPOSURE LEVEL
CME S&P 500 Index	$8,000	100.00%	100.00%
CME S&P 400 Index	$1,400	99.40%	98.94%
CME Major Market Index	$2,500	97.67%	97.24%
CME Russell 2000 Index	$1,600	97.29%	96.36%
CME Nikkei 225 Index	$3,000	97.80%	97.70%
CME FTSE 100 Index	$2,500	N/A	N/A
NYFE Composite	$2,500	100.00%	99.47%
CBT Wilshire 250	$2,400	97.45%	97.66%
KCBT Value Line Index	$5,000	100.00%	99.96%
KCBT Mini Value Line	$1,000	100.00%	100.00%
CEI Eurotop 10	$1,700	97.52%	98.21%

1/ Except as follows: The CME MMI began trading September 7, 1993, so CBT MMI data is used; the CME Russell 2000 began February 4, 1993; the CME FTSE 100 commenced October 15, 1992, but the data set is incomplete for days on which there was no open interest; the CBT Wilshire 250 commenced January 11, 1993; and the CEI Eurotop 100 began October 26, 1992.

2/ Maintenance margin levels as of October 21, 1993.

3/ The implied exposure tolerance levels reflect the percentage of daily changes in contract value that would have been covered by the minimum maintenance margin deposit given the actual one-day price changes over the given periods. For example, an exposure tolerance level of 95 percent would indicate that the current maintenance margin level would have covered 95 percent of historical daily changes in contract value. If the balance in the margin account had equalled the minimum maintenance margin, the remaining five percent of the daily changes in contract value would not have been covered, and hence margin calls would have been made to replenish the margin account to the initial margin level. If the balance had been between the higher initial and the maintenance margins, margin calls may have been made depending upon the magnitude of the price change.

Source: CFTC

surveillance programs, information sharing agreements, membership requirements, and circuit breaker and price limit mechanisms. FCMs have participant criteria and audits and the ability to set margin levels higher than the exchange-mandated minimum levels. Finally, the CFTC minimum capital and segregation of customer funds requirements provide additional financial safeguards.

h. Insurance Companies

Insurance companies act as both end-users and dealers.[322] Insurance companies are regulated primarily at the state level. Insurance companies are also subject to product regulation by the CFTC and SEC when they use exchange-traded derivatives.[323] The question of the adequacy of regulation of insurance companies involved in derivative activities appears to be an unresolved one.

The National Association of Insurance Commissioners (NAIC) has drafted a model insurance regulation which includes the issue of derivatives. Under the model regulation, entitled "NAIC Draft Investments of Insurers Model Act," insurers' participation in derivatives would be limited to hedging, limited income generation, and the sale of covered call options.[324] The draft model also sets internal control procedures and documentation guidelines. The proposed schedule of adoption of the Model Investment Law includes a three month discussion period followed by a three month exposure period and full adoption by the NAIC in September 1994.

The draft Model states that an insurer must be able to demonstrate the intended risk management characteristics of each hedging program through cash-flow testing or other appropriate analysis. Section 23 of the Model applies to life and health insurers and Section 41 applies to property and casualty insurers. The insurer may not enter into any hedging transaction if, as a result of and after giving effect to such transaction, the aggregate potential exposure and statement value of all such transactions would exceed 5% of admitted assets. The Model sets additional limitations on individual derivative instruments. The Model also states that an insurer may not enter into any income generation transaction if, as a result of and after giving effect to such transaction, the aggregate statement value, determined in accordance with Section 8 [Valuation of Investments], of all covered call options then written by an insurer in income generation transactions would exceed 1% of admitted assets.

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[322] Two insurance companies act as dealers, namely AIG and General Re.

[323] See Section B.2.a.: OTC Derivatives.

[324] See the National Association of Insurance Commissioners, "NAIC Draft Investments of Insurers Model Act," Sections 23 and 41, Derivative Transactions, NAIC, Washington, D.C., September 1993.

I. Investment Companies

Typically, institutional investors and investment companies, including mutual funds, use derivatives to hedge risks. For institutional investors covered under the Investment Company Act, namely investment companies, there exists restrictions on activities and disclosure requirements. Section 18 of the Investment Company Act restricts investment companies' ability to issue senior securities (debt or preferred stock). Investment in certain types of securities, such as an investment created by selling a call (a type of derivative), may create what is considered a senior security obligation and would therefore be prohibited if the call position were uncovered. By selling (writing) an uncovered call in stocks, for example, the investment company would be obligated to deliver stocks it does not yet own to another party at a future date, therefore creating an obligation for the investment company. If the obligation were covered by the underlying asset or other eligible asset placed in a segregated account, however, it would not be prohibited. The requirement that such positions be covered limits derivative activities of investment companies. Money market funds are particularly limited in their activities and generally would not be involved in derivatives.

If an investment company is to be allowed to pass income to investors on which it does not pay taxes, a Section of the IRS code limits investment companies from having more than 30% of its gross income generated from options, forwards, and futures held for less than 3 months. This could also limit certain derivative activities of an investment company.[325]

The SEC, under the Investment Company Act, also requires investment companies to disclose the types of securities in which it invests, the instruments it uses, and the risks associated with such activities. Therefore, the use of derivatives should be discussed where appropriate in such disclosures. Any material use of derivatives by an investment company should be disclosed under the current disclosure requirements. Investment Advisors who do not properly disclose such activities are liable under the anti-fraud provisions of the securities laws for material non-disclosure. Investment Advisors who are covered under the Investment Company Act are also subject to National Association of Securities Dealers (NASD) regulations regarding, among other things, suitability and know-your-customer rules.

There appears to be no direct danger posed to banks by the derivative activities of their mutual fund affiliates, as restrictions on transactions between affiliates are set forth in Section 17 of the Investment Company Act and in Sections 23A and 23B of the Federal Reserve Act.

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[325] IRS Code §851(b)(3).

j. Unregulated Users of Derivatives

Corporate end-users of derivatives and certain so-called hedge funds are for all practical purposes unregulated end-users of derivatives. In addition, certain subsidiaries of broker-dealers and insurance companies that deal in various derivative products are, to a certain degree, unregulated.

However, to the extent that such entities, including speculators, utilize exchange-traded derivatives, they are subject to CFTC and SEC speculative position limits or position accountability requirements that are designed to provide protection against price manipulation and requires reporting of the positions of large trades to facilitate market surveillance. The futures regulatory framework also prevents access of certain retail customers to the OTC marketplace. Entities such as corporations, pension plans and other unregulated institutional investors may be required under certain circumstances to report investment holdings to federal or state regulators.

The derivative dealing activities conducted in unregistered (unregistered with the SEC) affiliates of broker-dealers are those activities interpreted by the securities firm not to be securities activities. The derivative activities typically considered by securities firms not to be securities activities include the dealing of most swaps, primarily interest rate and currency swaps, and certain other OTC derivative instruments. However, the SEC does monitor the risks posed by the activities of unregistered affiliates through its risk assessment program. Specifically, pursuant to the Market Reform Act of 1990,[326] the SEC adopted risk assessment recordkeeping and reporting rules that provide the SEC with an overview of the financial and securities activities of affiliates that are likely to have a material impact on the broker-dealer's financial and operational condition.[327]

Regulatory access to information on the derivative positions of unregulated insurance subsidiaries varies widely by state.

According to the CFTC, available information, though incomplete, on the size of regulated entities' positions relative to the size of the derivative markets as a whole suggests that derivative market activities of unregulated entities represent a small portion of the total OTC derivative markets.[328]

k. Other Regulators

Certain self-regulatory organizations (SROs) exist which set rules regarding derivative activities. For example, the U.S. stock and futures exchanges are considered SROs. In addition, registered broker-dealers are also required to be members of one or more SROs, including the National Association of Securities Dealers (NASD).

Although the International Swaps and Derivatives Association (ISDA) has resisted

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[326] P.L. 101-432, 104 Stat. 978.

[327] 17 CFR §§240.17h-1T and 240.17h-2T. See Securities Exchange Act Release No. 30929 (July 16, 1992), 57 FR 32159.

[328] See also Question #3 posed to the regulators by Representative Leach.

turning itself into an SRO,[329] it works to standardize market terminology and conventions and provides other services, statistical gathering, educational programs, and legislative services.[330] ISDA recently adopted a code of conduct, covering all swaps traders and end-users, calling for ethical standards of good faith, courtesy, professional competence, confidentiality, and prompt payment.[331] In 1987, ISDA produced master agreements for interest rate and currency swaps, together with an accompanying definitions booklet. The widely used master agreements provided an industry standard, eliminating the need for negotiations on each swap, while still allowing the inclusion of customized features. Since 1987, the master agreements have been revised several times to accommodate changes and innovations in market practice.

While the IRS does not actually regulate market participants, IRS regulations are factors in creating or eliminating trading opportunities.[332] The IRS has issued complex sets of rules addressing the tax treatment of interest rate swaps (which it calls "notional principal contracts") and currency swaps (the Section 988 rules, pursuant to the Tax Reform Act of 1986, which govern foreign exchange transactions generally).[333]

The Financial Accounting Standards Board (FASB) has worked to develop a coherent accounting framework for derivative financial instruments.[334] FASB's approach is still evolving, but the trend appears to be to require greater disclosure of derivative positions.

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[329] Under U.S. commodities and securities laws, an SRO must meet numerous statutory and regulatory requirements.

[330] Congressional Research Service, "Derivative Financial Markets" October 29, 1993 (93-943E).

[331] Shale, Tony, "How ISDA Got the Message," Euromoney, April 1993.

[332] Congressional Research Service, "Derivative Financial Markets" October 29, 1993 (93-943E).

[333] See: Treatment of Notional Principal contracts Further Complicated by Prop. Regs., Journal of Taxation, v. 76, March 1992 by Daniel Breen, Peter Connors, and Bruce Weinrib; Foreign Currency Transactions Under the Section 988 Regulations, Taxes, August 1992, by Marylouise Dionne and Stephen Orme.

[334] Congressional Research Service, "Derivative Financial Markets" October 29, 1993 (93-943E).

4. CAPITAL STANDARDS[335]

a. Banks and Thrifts

(1) Current Capital Standards

Current capital requirements for derivative activities are governed by the standards of the Basle Accord that were agreed to in 1988. These risk-based capital standards have been adopted by the regulatory agencies and applied to: bank holding companies and state member banks regulated by the Federal Reserve; national banks regulated by the OCC; state non-member banks regulated by the FDIC; and thrifts regulated by the OTS.

The existing capital adequacy standards address the credit risk associated with an institution's on- and off-balance sheet activities, including those relating to derivative instruments. The risk-based capital (RBC) guidelines include an explicit capital charge for the credit risk exposure of OTC derivative products, which are off-balance activities. Foreign exchange rate and commodity contracts with an original maturity of 14 calendar days or less and interest rate, foreign exchange rate, commodity contracts traded on exchanges that require daily payment of variation margin are not covered by the risk-based capital guidelines.

For capital purposes, off-balance sheet derivatives are divided into two broad categories: interest rate contracts and exchange rate contracts. The instruments included under each category include:

Interest rate contracts

- single currency interest rate swaps
- basis swaps
- forward rate agreements
- purchased interest rate options (including caps, floors, and collars)
- and other instruments that give rise to similar credit risk.

Exchange rate contracts

- cross-currency interest rate swaps
- forward foreign exchange contracts
- purchased currency options
- and other instruments that give rise to similar credit risk
- equity-based and commodity-linked swaps are also treated as exchange rate contracts.

[335] See also Questions #1 and #2 regarding capital standards posed to the regulators by Representative Leach.

The capital charge for these derivative instruments is determined by a two-step process:

(1) the calculation of the "credit risk equivalent" (CRE) amount of the contract;

CRE = Present Credit Exposure + Potential Future Credit Exposure, where:

Present Credit Exposure (Replacement Cost) is the mark-to market amount it would cost the institution to replace the contract if a counterparty defaulted, with negative values equal to zero. The mark-to-market exposure is the present value of the net cash flows owed to the institution by the counterparty; and

Potential Future Credit Exposure is calculated by multiplying the notional amount of the contract by a Credit Conversion Factor. The potential risk add-on is an additional buffer to account for a possible increase in the current exposure. It provides an additional cushion in case, over the remaining life of the contract, interest rates, or exchange rates, or the relevant price index moves further in a direction that increases the current value of the contract, and hence the institutions's counterparty credit exposure.

The Credit Conversion Factor is determined by the following chart:

Remaining Maturity	Interest Rate Contracts	Foreign Exch. Rate Contracts
1 year or less	0.0%	1.0%
More than 1 year	0.5%	5.0%

(2) the assignment of the CRE amount to the proper risk-weighting category, up to 50%, based on the identity of the counterparty to the contract or the nature of the collateral. For example, transactions with banks would be assigned a 20% weight, while those with nonfinancial corporate businesses would be weighted at 50%. The risk-weighted amount is then subject to the 8% risk-based capital requirement. Institutions must maintain a minimum capital ratio of 8% against on-balance sheet assets and the credit equivalent amount of off-balance sheet items, including derivative instruments.

Currently, the capital requirements take into account only credit risk associated with derivatives, not interest rate risk or other market risks.

The OTS recently revised its risk-based capital rule to take account of interest rate risk, including the interest rate risk and risk reduction associated with financial derivatives. The new rule is effective on January 1, 1994. Under the revised rule, institutions with "above normal" levels of interest rate risk will be subject to an interest rate risk capital component. OTS developed a model to estimate the interest rate risk exposure of savings associations. The results of that model will be used by OTS to determine how much capital, if any, an association will be required to hold for interest rate risk, including interest rate risk associated with derivatives.

It is important to note that in addition to the Basle risk-based capital standards, the U.S. regulators have imposed a leverage capital standard on banks and thrifts. As of February 1991, leverage capital is based solely on a ratio of Tier 1[336] (or core) capital to total assets. The most highly-rated banks in terms of safety and soundness (i.e., those rated composite 1 under the CAMEL system[337]) that are not anticipating or experiencing significant growth are required to meet a minimum Tier 1 leverage capital ratio of at least 3%. All other banks are required to meet a minimum Tier 1 leverage capital ratio of at least 100 to 200 basis points above the 3% level -- that is, an absolute minimum leverage ratio of at least 4%.

Some have suggested that the risk-based capital ratio should substitute for the leverage ratio. However, regulators generally maintain that both ratios are useful. The FDIC stated that a simpler leverage ratio may be preferable to the more complicated risk-based standard.[338]

In 1989, the OTS adopted a 1.5% tangible and a 3% core capital to total assets leverage standard. Currently, the OTS is finalizing revisions to its existing 3% core leverage capital requirement for savings associations, so that its minimum leverage capital standard will be at least as stringent as the revised leverage capital requirement that is now applied to national banks.

In addition, Section 38 of the FDI Act as added by Section 131 of FDICIA requires each federal banking agency to implement prompt corrective action for the institutions that it regulates based primarily on capital standards. Section 38 requires the federal banking agencies to specify, by regulation, the levels at which an institution would be within each of five categories. The five categories are defined as follows.

Capital Levels for Five Capital Categories[339]

	Total risk-based capital ratio	Tier 1 risk-based capital ratio	Tier 1 leverage ratio
Well-Capitalized	10% or more	6% or more	5% or more
Adequately Capitalized	8% or more	4% or more	4% or more
Under-Capitalized	under 8%	under 4%	under 4%

[336] Tier 1 capital may be thought of as a close approximation to pure, tangible equity that is available to absorb unexpected losses. Tier 1 capital includes common stock, retained earnings, and perpetual preferred stock and goodwill acquired before March 1988.

[337] The CAMEL rating is a measure of the relative soundness of a bank. The term stands for a composite rating based on Capital, Asset, Management, Earnings, and Liquidity. CAMEL ratings are calculated on a scale of 1-5, and are used by bank supervisory agencies to evaluate a bank's conditions. A rating of 1 is given to banks with the strongest performance ratings. Banks given a 4 or 5 rating are placed on the watch list of banks in need of supervisory attention.

[338] Minority Staff Report, "Bank and Thrift Capital," House Banking Committee, April 1993.

[339] Total capital to risk-weighted assets; Tier 1 capital to risk-weighted assets; and Tier 1 capital to total assets.

Significantly Under-Capitalized	under 6%	under 3%	OR	under 3%
Critically Under-Capitalized	has a "tangible equity"[340] to total asset ratio of 2% or less.			

(2) Proposed Capital Standards

(a) OCC, FDIC, and FED Proposal for Interest Rate Risk: Information related to interest rate risk (IRR) exposures of derivatives will be disclosed and evaluated under proposed revisions to risk-based capital standards in response to Section 305 of FDICIA. The revisions propose new disclosure requirements as well as capital standards.[341]

The OCC, FDIC, and the FED ("the banking agencies") are working together on these proposed revisions. The banking agencies' joint notice of proposed rulemaking on IRR was published in the Federal Register (58 FR 48206) for comment on September 14, 1993. The comment period ended on October 29, 1993. After the comment period, the banking agencies will issue the final rule. The banking agencies have proposed implementing the reporting requirements for IRR contained in the rule effective with the March 31, 1994 Call Reports, and making the revised capital requirements for IRR contained in the rule effective on December 31, 1994.

Section 305 of FDICIA requires each banking agency to revise its risk-based capital standards to ensure that those standards take adequate account of IRR. The proposed rulemaking would establish procedures for measuring banks' IRR exposures and determining the amount of capital that may be needed. Interest rate risk would be measured as the change in the net economic value of a bank for a specified change in interest rates.

A bank's exposure to IRR would be measured either by the bank's internal risk measurement system, if approved as adequate by the regulators in the examination process, or by a basic supervisory model. The methodology used in the supervisory model is similar to the methodology proposed by the Basle Committee to measure the general market risk in trading portfolios.

The proposed rulemaking solicits comment on two alternative methods for determining the amount of capital a bank may need to account for IRR. One method ("Minimum Capital Standard" approach) would impose an explicit minimum capital charge based on the amount of measured IRR exposure in excess of a supervisory threshold. The other method ("Risk Assessment" approach) would not introduce an explicit minimum capital charge into the risk-based capital standard, but rather would assess the need for capital on a case-by-case basis, considering both the level of measured exposure and qualitative factors. These factors would include a bank's IRR

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[340] Tangible equity is a newly defined term to be used only for determining which institutions are critically undercapitalized. Tangible equity combines elements of core capital (such as common equity capital) and cumulative perpetual preferred stock minus all intangible assets except for limited amounts of purchased mortgage servicing rights.

[341] For more detailed discussion on the proposed disclosure requirements for Section 305, see Section B.6.a.(2): Section 305 of FDICIA.

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management, internal controls, and the overall financial condition of the bank, including its earnings capacity, capital base, and the level of other risks which may impair future earnings or capital.

(b) OCC Proposed Rule on Collateralized Transactions: The OCC published a Notice of Proposed Rulemaking on Collateralized Transactions which would amend the risk-based capital guidelines to lower the risk weight from 20% to 0% for particular transactions that are collateralized by cash or government securities. According to the OCC, this risk-based treatment would more accurately reflect the minimal operational risk and the near absence of credit risk for certain transactions. Although not specifically listed as a type of transaction covered by the proposed rule, the OCC requested comment upon, and is considering including, collateralized financial derivative counterparty exposures among the transactions that could receive a 0% risk weight. The OCC anticipates working with the Federal Reserve and the FDIC to ensure a uniform application of collateralized transactions rules.

(c) Basle Committee Proposals: When the Basle Accord was reached in 1988, authorities recognized its limitations, including the need to develop capital standards for market risks such as interest rate and foreign exchange risks. In April 1993, the Basle Committee on Banking Supervision,[342] (the Committee) under the Chairmanship of E. Gerald Corrigan, former President of the Federal Reserve Bank of New York, issued a package of supervisory proposals dealing with netting[343] and market risks,[344] together with an approach for the measurement of interest rate risk.

Unlike the market risk and netting proposals, the proposals for interest rate risk do not involve capital charges because they address only the measurement of interest rate risk. Interest rate risk is a significant risk which banks and their supervisors need to monitor carefully. Unfortunately, many difficult measurement problems are associated with interest rate risk and it was the intention of the Basle Committee to develop a measurement system rather than an explicit capital charge for interest rate risk. The Basle Committee holds the view that the existing capital requirements can be regarded as providing adequate protection against interest rate risk exposure in most situations. The measurement system is designed to identify institutions that may be incurring extraordinarily large amounts of interest rate risk.[345]

What follows is a summary of the netting and market risk proposals accompanied by a more complete description of each. A brief discussion on the proposals for interest rate risk is also included. Comments on the Basle proposals are due by December 31, 1993.

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[342] The Basle Committee on Banking Supervision is a Committee of banking supervisory authorities which was established by the central bank Governors of the Group of Ten countries in 1975. It consists of senior representatives of bank supervisory authorities and central banks from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, Netherlands, Sweden, Switzerland, United Kingdom, and the United States. It usually meets at the Bank for International Settlements in Basle.

[343] Netting is an agreed offsetting of positions or obligations by trading partners or participants in a system. The netting reduces a larger number of individual positions or obligations to a smaller number of positions.

[344] Proposals for instituting specific capital charges to open positions in foreign exchange (Proposal for Foreign Exchange Risk) are contained within the proposals for market risk.

[345] Federal Reserve Press Release on Basle Committee on Banking Supervision consultative papers issuance, April 30, 1993.

(i) BIS Proposal for a Change in the Supervisory Recognition of Netting

Summary

- The Basle Committee proposal contains text to amend the Basle Capital Accord[346] in order to recognize certain bilateral netting arrangements in the measurement of credit risk associated with certain classes of financial instruments.

- The Basle Committee proposal defines the precise conditions under which banks would be permitted to net the credit risks arising from trading in certain financial instruments under the Basle Capital Accord.

- The Basle Committee proposal indicates preliminary thinking as to the conditions under which multilateral netting might be recognized for capital measurement purposes at some future date (**See Appendix C**).

One of the most significant advances of the 1988 Capital Accord was its coverage of the credit risks arising from off-balance sheet items. In November 1990, the Bank for International Settlements (BIS) published the Lamfalussy Report on interbank netting schemes. This Report recognized that netting arrangements have the potential to improve both the efficiency and the stability of interbank settlements, by not only reducing costs but also credit and liquidity risks, provided that certain conditions are met. The Lamfalussy Report concluded that some form of bilateral netting was likely to be legally effective in each G-10 country.

The Basle Committee on Banking Supervision agrees with the analysis in the Lamfalussy Report. The Committee proposes that the 1988 Capital Accord should be revised to recognize, in addition to netting, other forms of bilateral netting of credit exposures to the extent that such arrangements are effective under relevant laws and comply with the other minimum standards as set forth in the Lamfalussy Report. The minimum standards for netting schemes set out by the Lamfalussy Report are listed in **Appendix D**. The revisions would recognize bilateral netting where the appropriate national supervisors are mutually satisfied that agreed minimum legal requirements are met.

The Committee recognizes that no single form of netting arrangement can be identified as appropriate in all jurisdictions. For these reasons, the proposals are deliberately cautious in respect of their legal requirements. The Basle Committee's role was to lay down minimum standards which national supervisors would apply. One such standard would require that a particular form of netting contract be legally challenging. The criteria set out in **Appendix E**, which clarifies the standard, represent the minimum legal requirements for internationally-active banks to receive the benefit of net treatment under the Accord.

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[346] In July 1988, the Basle Committee established a common measurement system and a minimum standard for the capital adequacy of international banks in the Group of Ten countries. These arrangements, commonly referred to as the Basle Accord, came into full force at the end of 1992 and have been adopted by numerous other countries.

The present rules in the Accord permit a choice between two methods of calculating the credit exposure on forward obligations. The method used by most major banks, **the current exposure method**, is to mark each instrument to market, sum the values of all instruments with positive values to establish the current replacement cost and add to this an amount (an add-on) for potential future exposure that is based on the notional underlying principal of each contract.

▸ The Calculation of Replacement Costs for Netted Contracts

The replacement cost for those individual transactions subject to each bilateral netting arrangement will be recorded for capital purposes on a net basis to produce a single credit or debit position for each counterparty.

▸ The Calculation of Add-Ons for Netted Contracts

For netted transactions, the Basle Committee favors retaining the Accord's present approach to calculating add-ons for potential future exposure, i.e., multiplying the total notional amount of each transaction by the appropriate percentage. Various methods have been considered for calculating add-ons in a bilateral netting environment. However, the Committee has not yet identified any evidence suggesting that the need for add-ons declines appreciably in such an environment.

The second method of calculating the credit exposure on forward obligations is **the original exposure method**. Under this method, there is no separate assessment of the current and potential future exposure. It is therefore not possible to measure the amounts by which credit exposures can be netted. A large majority of the Basle Committee feels this fact makes the original exposure method inherently unsuitable for assessing credit risk in a netting environment. As a result, this majority believes no internationally active bank should be permitted to receive supervisory recognition of netting contracts if it uses this method.

The FDIC stated that the recognition of bilateral and multilateral netting arrangements, and the immediate reflection of these in capital adequacy standards, will have the effect of significantly reducing the amount of regulatory capital without a clear, commensurate decrease in credit risk, unless the legal uncertainties have been clarified.[347]

(ii) BIS Proposal for the Supervisory Treatment of Market Risks

Summary

▸ The Basle Committee proposal would set forth a framework to modify the Basle Accord by providing explicit capital charges for the risks associated with price changes in open positions. Until now, the Accord provided for explicit capital charges only for credit risk.

[347] Contained in FDIC's answer to Question #9 posed by Representative Leach.

- The Basle Committee proposal could result in a higher or lower aggregate capital requirement for institutions, depending on the risk profile of each.

- The Basle Committee proposal is a further step in the direction of greater convergence in supervisory policies across national boundaries and across various classes of financial instruments.

The primary objective of the Basle Accord was to establish minimum capital standards designed to protect against credit risk. At the time, however, it was recognized that in due course the capital adequacy framework would have to be broadened to take direct and explicit account of market risk. In the intervening period, changes in technology, in market practices and in the nature of many "banking" activities have made it even more important that the 1988 Accord be broadened to take into account market risk. The Basle Committee proposals apply capital requirements to banks for the market risks arising from position-taking in debt and equity securities in the trading portfolio and in foreign exchange. The framework also encompasses positions in derivative instruments used in each of these three principal lines of activity.[348]

The Basle Committee proposals are necessarily more complex than existing capital requirements and focus on a somewhat shorter time horizon, commensurate with the difference in perspective between banking and trading activities. The Basle Committee favors capital requirements in preference to limits as the appropriate instrument for international convergence in the treatment of market risk because capital requirements give banks added incentives to use hedging techniques, while ensuring that a prudent capital cushion remains available to cover possible losses. They also enable bank managements to retain flexibility in managing their risks by assessing the risk/reward profile and allocating capital accordingly.

(iii) BIS Proposal on Interest Rate Risk

The 1988 Basle Accord, which came into full effect at the end of 1992, established risk-based minimum capital standards for internationally active banks. The original Accord focused primarily on credit risk, and did not impose explicit capital charges tied to other banking risks such as those relating to changes in interest rates, or to changes in foreign exchange rates.

Following adoption of the Accord, representatives from Basle Committee member countries have been working to develop ways of assessing a bank's overall exposure to changing interest rates and to a variety of other so-called market risks. Part of the April 1993 Basle Committee proposals includes a consultative paper on modifying the Accord by providing explicit capital charges for market risks (see point 1 of this section). Also part of the April 1993 Basle Committee proposals is a consultative paper on the

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[348] For a detailed explanation of the application of the framework for applying capital requirements to market risks, refer to Appendix F.

Appendix G describes the Basle Committee framework for measuring the risk of holding or taking positions in debt securities and equities in the trading account.

measurement of interest rate risks[349] arising from the more traditional activities of banks, primarily lending and deposit taking. Because of uncertain maturities and uncertain sensitivity to market rates of many of their assets and liabilities, banks have a hard time with the measurement of interest rate risks. The Basle Committee proposal on interest rate risks offers an approach to alleviating these measurement difficulties.[350]

Changes in interest rates may not only affect an institution's current earnings, but also its future earnings and the economic value of its capital, reflecting changes in the value of the institution's financial instruments. For a bank with liabilities carrying interest rates which change faster than those on its assets, its net present value will decline if interest rates rise. Measuring that risk is the focus of the Basle Committee interest rate risk proposals.

The Basle Committee is not proposing a common international capital standard for interest rate risk. Rather, its efforts are being focused on the development of a measurement system which supervisors could use for observation purposes and a means for identifying "outliers," leaving each authority free to decide how to respond in the case of institutions identified as high risk.

In measuring interest rate risk, there are a number of complex issues which could merit different solutions depending on the purpose of the analysis and on particular circumstances. There are difficulties associated with the treatment of items common to banking whose actual maturities may be uncertain, or can differ from their contractual terms. Examples include pre-payable mortgages and instruments such as savings deposits and demand deposits on which the interest paid tends to be less responsive to changes in market interest rates and which allow individual banks some discretion in the timing and extent of changes to the rates they pay. The way in which these items are treated is crucial to the measurement of interest rate risk. However, there is no consensus on a standard approach or common set of assumptions which could be applied across all classes of instruments and across all countries.

As a first step to alleviate interest rate risk measurement difficulties, the Basle Committee is seeking to develop a consensus on a common reporting framework which would allow national supervisory authorities to collect consistent information and from which various measures of interest rate risk could be considered and ultimately constructed. The framework is designed to facilitate changes to the measurement of risk as a consensus emerges as to which measure or measures are to be preferred.[351]

(d) The Basle Committee Sub-Group on Off-Balance sheet activities is also reviewing the current risk-based treatment of derivatives for counterparty risk. This review could lead to recommended changes in the factors used to estimate "potential future" counterparty risk for some financial derivatives. This work is still under discussion by

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[349] Properly defined, interest rate risk is the risk that changes in market interest rates might adversely affect a bank's financial condition.

[350] "Measurement of Banks' Exposure to Interest Rate Risk," Consultative Proposal by the Basle Committee on Banking Supervision, Basle, Switzerland, April 1993.

[351] Ibid.

the Basle Committee's sub-group and no formal proposal has yet been made.

b. Broker-Dealers[352]

(1) Current and Proposed Capital Standards

Broker-dealers engaged in derivative activities involving securities are required to be registered with the SEC and are subject to the SEC rules that require, among other things, broker-dealers to maintain certain specified minimum levels of net capital.

The derivative dealing activities which take place in unregistered (not registered with the SEC) affiliates of securities firms are not subject to the Net Capital Rule. Those derivative activities interpreted by securities firms not to be securities activities are conducted in the unregistered affiliates. These activities typically include most swaps, primarily interest rate and currency swaps, and certain other OTC derivative instruments. The SEC has been informed by certain broker-dealers that the capital requirements necessary to conduct OTC derivative activities in registered, vs. unregistered, broker-dealers is one factor, among others, including business, economic, and legal considerations, that has encouraged certain derivative activities to be conducted in unregistered affiliates. This was confirmed in meetings Minority Staff had with market participants.

All other derivative activities interpreted by securities firms to be securities activities must be conducted in a registered broker-dealer and are subject to the Net Capital Rule. Activities typically considered by securities firms to be securities activities include exchange-traded options on securities, exchange-traded options on indices of securities, exchange-traded options on foreign currency, and OTC equity index options.

Net capital is defined as a broker-dealer's net worth computed in accordance with GAAP, plus satisfactory subordinated liabilities, less assets not readily convertible into cash[353] and most unsecured receivables. The broker-dealer then subtracts prescribed percentages (or haircuts) from the market value of its securities and commodities positions to account for market and credit risk. The rule also requires broker-dealers to mark their securities and commodities positions to market on a daily basis.

Although the current capital rule contains treatment for derivative products transactions, much of the rule's current structure was developed prior to the recent growth and development of the OTC derivative markets. The SEC, therefore, is considering different approaches to the treatment of derivative products under the Net Capital Rule in order to evaluate whether the Net Capital Rule should be modified in light of developments in the derivative markets generally and the OTC market in particular. Therefore, the SEC issued for comment the SEC Net Capital Concept

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[352] See also Question #2 posed by Representative Leach regarding capital and Question #26 regarding comments received on the SEC's Concept Release on capital.

[353] Assets not readily convertible into cash include goodwill, furniture and fixtures, buildings, prepaid expenses, and exchange seats. 17CFR §240.15c3-1(c)(2)(iv).

Release No. 34-32256 dated May 4, 1993. The comment period for the Concept release has been extended to December 17, 1993. One approach under consideration would involve maintaining the current Net Capital Rule. A second approach would devise capital requirements that comprehensively address the credit and market risks posed by derivative products so that firms could conduct their derivative activities in registered broker-dealers without what they often regard as undue capital constraints. A third approach, which could be combined with either of the first two approaches or implemented separately, would be to formulate separate capital guidelines that would specifically apply to DPCs that are registered broker-dealers.

The current treatment of various derivative products under the Net Capital Rule (Rule 15c3-1 of the Securities Exchange Act of 1934) is summarized below, together with alternative approaches presented in the Concept Release.[354]

The Current Net Capital Rule and the Proposed Net Capital Rule Set Forth in the Concept Release

(a) Market Risk:

(i) Standardized Options: The net capital rule provides for two different capital treatments for standardized options positions held by broker-dealers. The first approach assumes that options will be exercised or held to expiration. Therefore, capital charges are based on the market value of the underlying security. The second approach assumes that options will be traded and, therefore, capital charges are based on the market value of the option rather than the underlying security. Both approaches generally assess minimum charges for uncovered option positions or recognized option strategies.

The Concept Release proposes adopting a theoretical pricing model system developed by the Options Clearing Corporation to determine haircuts for broker-dealers' standardized options positions under the net capital rule. The proposal under consideration would require broker-dealers to take a capital charge on a portfolio of options on a given underlying instrument equal to the difference between the closing market prices and the options' theoretical prices after applying assumed market movements of the underlying instrument and after netting theoretical profits and losses on those positions.

The Concept Release stated that because the market risk of a derivative product is related to the market risk of the underlying asset, the underlying asset may be used to offset the market risk of the derivative. Participants in the derivative markets argue that the appropriate approach to measuring market risk is not to measure the price sensitivity of the individual contract, but of the portfolio of contacts and related assets and liabilities that a particular dealer holds.

The SEC recognizes that transactions in derivative products by firms, which

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[354] The Concept Release does not include any analysis of the status of particular derivative contracts under the federal securities laws.

are dually registered as broker-dealers and FCMs, may raise capital compliance issues that need to be addressed in coordination with the CFTC. The CFTC has informed the SEC that it is reviewing the continuing appropriateness of its Rule 1.19 which precludes firms registered as FCMs from offering, underwriting or assuming financial responsibility for dealing in OTC commodity options, except for options traded pursuant to the rules of a U.S. or foreign contract market (17 CFR 1.9).

(ii) OTC Options: Long positions in OTC options generally are treated conservatively under the net capital rule because of the attendant credit risk and their limited liquidity. This conservative treatment requires broker-dealers to deduct the full time value premium[355] of OTC options from their net worth. In addition, broker-dealers are required to apply a haircut on the option's intrinsic value. Moreover, as a general rule, no preferential hedging or spread benefits are allowed for long OTC options.

The Concept Release requested comments on whether a pricing model for determining haircuts, similar to that being considered for standardized options, could be used for OTC options.

(iii) Futures Contracts and Options on Futures Contracts: Capital charges for futures contracts and options on futures contracts are based on the margin requirement of the applicable commodity clearing organization.[356] If these instruments are hedged by securities products, capital charges generally are determined by the net capital rule and the interpretations thereunder. Most trading in futures contracts and options on futures contracts, where the underlying instrument is a security, is governed by the net capital rule.

The Concept Release did not propose any changes to the capital treatment of futures contracts and options on futures contracts under the net capital rule.

(iv) Forward Contracts: The net capital rule assesses a capital charge on forward contracts in currency, commodities, and U.S. government securities equal to the haircut applied to the underlying instrument.[357] In addition, in order to account for the credit risk associated with forward contracts, the unrealized profit on a particular forward position is considered to be an unsecured receivable under the net capital rule, and therefore is subject to a 100% capital charge.

The Concept Release suggests an alternative capital charge for the market

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[355] The time value premium of an option is the amount by which the option premium itself exceeds the option's intrinsic value. An option's intrinsic value is equal to the difference between the strike price and the price of the underlying.

[356] If the broker dealer is a member of a self-regulatory organization but not a clearing member of the commodity clearing corporation clearing the commodity contract, it must take a haircut deduction equal to 150% of the greater of the applicable maintenance margin requirement of the applicable board of trade or the commodity clearing corporation.

[357] The general net capital treatment of forwards on commodities (other than foreign currencies which receive a charge of either 6% for major currencies or 20% for other currencies) is set forth in Appendix B of Rule 15c3-1. Broker-dealers must deduct 20% of the market value of uncovered forward contracts to account for market risk. Broker-dealers incur no market risk deduction if the forward is currently registered as deliverable on a contract market and is covered by an open futures contract or by a commodity options on a physical. Broker-dealers incur a market risk deduction of 10% for other forward contracts to purchase or sell commodities that are covered by an option futures contract.

risk related to currency forwards. The SEC feels that the market risks related to forward contracts for commodities and U.S. government securities are adequately addressed under the existing net capital rule. The Securities Industry Association (SIA) has proposed a net capital treatment of currency forwards on which the SEC seeks comment in its Concept Release. The proposal for market risk would assess a capital charge on the net long or short position of all uncovered currency positions. The amount of the capital charge would depend upon to which of three categories the currency position was assigned. Category A[358] currencies would require a charge of 6% on the uncovered position. Category B[359] currencies would require an 8% charge on the uncovered position. Category C[360] currencies would require a charge of 20% charge on the uncovered position. The proposal would apply one charge to any long currency position offset with a short position of any other currency. The charge on the matched position would be equal to the charge on the currency in the category with the highest capital charge of the two categories involved.

The Concept Release also requested comment on the need to account for interest rate risk in currency forwards. Interest rate risk in a forward contract is the risk that a shift in the interest rate differential will cause the value of the forward contract to change even when there is not change in the spot rate. The SEC requested comments on an approach to address interest rate risk that would result in assigning currency forward positions to maturity bands and assessing a capital charge for interest rate risk depending upon the maturity of each specific contract.

(v) Interest Rate Swaps: The SEC has been told that few swaps are booked in a registered broker-dealer because of the treatment accorded to swap transactions by the net capital rule. The first component of the capital treatment for interest rate swaps requires the current value of the next interest payment due from the interest rate swap to be considered an unsecured receivable and to be deducted from net worth in arriving at net capital. The second component of the capital treatment of interest rate swaps requires a deduction or haircut on the notional amount of the swap. The amount of deduction depends on the maturity of the swap and whether the broker-dealer has offset the swap.

The Concept Release presented two alternative approaches to the treatment of interest rate swaps under the net capital rule. The first approach would calculate exposure from a large interest rate swap book into a portfolio of specified debt securities that are equivalent, in terms of interest rate sensitivity, to the swap payment flows. These derived securities would then be treated under the net capital rule in the same way as actual bond positions with the same characteristics. The value of the derived securities would be calculated in terms of the zero coupon bond equivalent.

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[358] Category A currencies are the German mark, the British pound, the Japanese yen, the Canadian dollar, the Swiss franc, the French franc and the European Currency Unit.

[359] Category B currencies are the Italian lira, the Dutch gilder, the Danish kroner, the Swedish kroner, the Belgian franc, the Norwegian kroner, the Finnish mark, the Spanish peseta, the Australian dollar and the New Zealand dollar.

[360] Category C currencies are all currencies that are not Category A or Category B currencies.

The second approach in the Concept Release for the treatment of interest rate swaps is to assign the notional amount of the swaps to the maturity bands currently in use for government securities, and apply a capital charge, ranging from 0 - 6%, depending on maturity. The capital charges of long and short positions in swaps could be offset depending on the relative maturities of the two swaps or could be hedged with other debt instruments.

The Concept Release also asked for comment on the following questions: (1) To what extent does a secondary market for interest rate swaps exist? To what extent is it possible to close out an interest rate swap?; and (2) To what extent should treatment under the net capital rule reflect the probability of netting in bankruptcy.

(vi) Currency Swaps: Under the net capital rule, currency swaps are treated as two currency forwards, one long and one short.

The Concept Release requested comment on the application to currency swaps of the proposed treatment of currency forwards.

(vii) Equity Swaps: Under the net capital rule, broker-dealers are required to consider the next net payment amount as an unsecured receivable, and, therefore, must deduct that amount from net worth in arriving at net capital. In addition, broker-dealers are required to take a deduction on the notional amount of the equity swap equal to the haircut applicable to the underlying position. The net capital rule, moreover, does not allow any beneficial treatment for positions deemed to offset the risk associated with a long equity swap (i.e., when the broker-dealer is entitled to receive the cash flow linked to a stock index position.)

The Concept Release invited comment on alternative methods of determining a capital charge.

(b) Credit Risk

Unlike exchange-traded derivative products, OTC derivatives involve credit risk, the risk that the counterparty to the OTC contract will default. For exchange-traded contracts, the clearing organization collects margin and substitutes the creditworthiness of a single dealer for that of the clearing organization, which represents the combined creditworthiness of all the clearing participants. In this context, the SEC did not request comments on the credit risk involving centrally-cleared, exchange-traded transactions. Instead, the SEC requested comment on the appropriate capital treatment to reflect the credit risk in OTC derivative products. The amount of credit exposure at a particular time is commonly measured by the derivative product's replacement cost, which is essentially the cost of entering into a new agreement under current market conditions with rate or other price data equivalent to those on the agreement being replaced. Historically, unsecured credit extensions have not been significant elements of a broker dealer's business and, as a result, the net capital rule treats very conservatively positions that entail unsecured credit risk. Because the unrealized profit on OTC derivative generally is considered to be an unsecured receivable, broker-dealers are required to

deduct 100% of this amount from net capital. This capital charge is assessed in addition to any applicable capital charge for market risk.

The Concept Release issued for comment two approaches for the determination of capital charges on the credit risk of derivative products.

The first is an SIA approach[361] which recommends assessing a credit risk capital charge for OTC derivative consisting of two distinct charges.

The first charge would be a basic credit charge. The basic charge would require an 8% charge on the "credit equivalent amount" multiplied by the "counterparty factor" for a given counterparty. The "credit equivalent amount" is the value obtained by marking-to-market all contracts relating to open trades plus 1% of the notional amounts of contracts with less than one year to maturity and 5% of the notional amount of contracts with a maturity of greater than one year. The value obtained by marking-to-market also may be referred to as "the deficit." The deficit is the current credit exposure on an open trade. For a long OTC option contract, the deficit is the in-the-money amount.[362] For a forward agreement, the deficit is the profit accumulated on the transaction since its inception. The net deficit for a counterparty would be reduced by any margin or other deposits held by the broker-dealer in connection with such transactions with the same party and by any margin calls issued by the broker-dealer outstanding not more than two business days. The counterparty factor proposed by the SIA is 0% for Zone A[363] central governments and central banks. The counterparty factor is 20% for Multilateral Development Banks,[364] for Zone A regional governments, and for Zone A credit institutions. The counterparty factor is 50% for all other entities.

The second charge is the concentration charge. The basic charge described above is meant to protect against the risk that a counterparty fails to perform its obligation under an agreement involving an OTC derivative contract. The concentration charge is meant to discourage a firm from assuming a large amount of credit risk with any one particular counterparty or from assuming too much overall credit risk. This charge would require the broker-dealer to take a charge equal to the sum of: (1) the amount by which the net deficit with one counterparty exceeds 10% of the firm's tentative net capital[365] and (2) the amount by which the net deficit as to all counterparties exceeds 25% of the firm's tentative net capital.

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[361] The SIA recommended an approach to address the credit risk of currency forwards which could be applicable to all derivatives.

[362] "In-the-Money" refers to an unrealized [capital] gain position, where current market price exceeds the strike, or exercise (purchase) price. The opposite is referred to as "Out-of-the-Money."

[363] Zone A central governments include: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Saudi Arabia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States.

[364] The Multilateral Development Banks include the European Investment Bank, the European Bank for Constructions and Development, the International Bank for Reconstruction and Development, the International Finance Corporation, the Inter-American Development Bank, the African Development Bank, the Asian Development Bank, the Caribbean Development Bank, and the Nordic Development Bank.

[365] Tentative net capital is equal to a broker-dealer's net capital before the application of haircuts.

The second approach proposed by the Concept Release would require the broker-dealer to take a capital charge based on some percentage of the broker-dealer's total exposure to all counterparties. The amount of the charge on the particular exposure would depend on the credit rating of the counterparty. The charge would be higher for lower rated counterparties. The underlying theory is that this approach would account for the risk involved in entering into too many transactions with lower rated counterparties. This approach could also call for an additional base amount of capital.

The Concept Release also invites comments on the various issues regarding netting, such as the uncertainty related to the legality of netting arrangements throughout the world. The Concept Release also asks that if a replacement cost method is recommended, how could the capital rule be structured to reduce potential future credit exposure.

The Concept Release invited general comment on the effect of other risks, namely operational, liquidity, leverage, legal, and systemic, on the derivative markets and to recommend net capital, margin, clearing, or other approaches the SEC may take to reduce these risks.

Finally, the Concept Release asked for comment on Derivative Products Companies (DPCs) which are triple A rated subsidiaries of broker-dealers that provide the parent with a vehicle for participating in derivative products transactions through an increased credit standing. Assuming DPCs are registered with the SEC pursuant to the Exchange Act (they are currently unregistered), the SEC invited commentators to discuss whether Rule 15c3-1, the net capital rule, should be amended to recognize DPCs as a special class of broker-dealer with rules specific to their business. If so, from what provisions of Rule 15c3-1 should DPCs be exempt? Comments were also solicited on the impact, if any, of such exemptions on the objectives of the Securities Investor Protection Act of 1970 (15 USC 78aaa.) The SEC asked if the current financial responsibility rules are believed to be appropriate for DPCs, what modifications to the rules are necessary to insure that the rules adequately addresses the special requirements of DPCs.

c. CFTC Requirements

To protect customers' funds, the CFTC sets minimum net capital financial requirements for all firms and persons who handle customer funds.[366] Both the CFTC and the SEC set minimum capital requirements for FCMs and broker dealers and set requirements for the protection of customer funds and property. The CFTC's capital rule defers to the SEC's haircut[367] for proprietary positions in securities, to reflect the market risk in such positions, and to the SEC's minimum capital requirement and calculation methodology if securities brokerage is a given firm's dominant line of business. The CFTC currently does not permit those it regulates to grant OTC

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[366] 17 CFR 1.17.

[367] A "haircut" is a deduction taken in a firm's capital computation in order to account of specific risks and uncertainties and is enumerated in regulatory capital rules. The intended regulatory result is that a firm's capital, after the deduction of all required haircuts, will be the amount of liquid capital a firms has after a reserve has been set aside of market contingencies.

commodity options and charges significant haircuts for forward contract obligations. Clearing organizations impose their own capital requirement for clearing members. Margin requirements are also a key financial protection under both regulatory regimes for derivatives.

Unlike banking regulatory capital requirements, the capital requirements of the CFTC and the SEC are so-called "liquid capital" rules. That is, the CFTC and SEC capital rules are designed to assure that assets can be readily marshalled and liquidated in an emergency situation for the protection of customers and other creditors.

Like the SEC, the CFTC is exploring whether changes should be made in its minimum capital requirements or separate requirements should be adopted to accommodate certain types of OTC activity without harm to the prudential protections in place.

5. ACCOUNTING TREATMENT FOR FINANCIAL DERIVATIVES

Accounting issues[368] are important to the financial derivative markets. Considerable time and effort on the part of industry participants and various associations has been expended to improve accounting standards and practices.

For example, the American Institute of Certified Public Accountants (AICPA) is currently in the process or revising the Audit and Accounting Guide for Brokers and Dealers in Securities.[369] In May 1986, the FASB added a project on accounting for financial instruments to its agenda. Among the discussion memoranda and statements issued in connection with the project, several have notable relevance to derivative securities, particularly Statement No. 105, Disclosure of Information About Financial Instruments with Off-Balance Sheet Risk and Financial Instruments with Concentrations of Credit Risk (March 1990), and Statement No. 107, Disclosures about Fair Value of Financial Instruments (December 1991). These statements require disclosure of credit risk and fair value of derivatives.[370]

Historically, all accounting was cash-based, with transactions recognized only when cash was received or paid. Over time, accounting methods have evolved to include accounting practices such as accruals-based accounting and market value-based accounting.[371]

Accruals-based accounting, which matches revenue and expenses by allocating them over time, can be applied to any derivative transaction, but this method provides limited information about credit exposures to counterparties. For example, it reflects the exposure on a swap only to the next payment date, rather than the full extent of the

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[368] See responses to Questions #1 and #7 posed to the regulators by Representative Leach.

[369] Source: Securities and Exchange Commission.

[370] See Section E.6.: **Disclosure Treatment for Financial Derivatives** for further details.

[371] Source: Group of Thirty

economic exposure. In addition, accruals accounting has been criticized for not providing meaningful information about a dealer because it reports only realized gains and losses. It takes no account of unrealized gains and losses from movements in market rates between the transaction date and the date at which financial statements are drawn. Accruals accounting, therefore, provides only a limited picture of performance.

Market value-based (mark-to-market) accounting records trading assets and liabilities at market value in the balance sheet and unrealized gains and losses in income for the period. This method provides more timely information about the performance of trading activities and provides more meaningful information about the true credit exposure to counterparties (since it reflects the amount at stake should the counterparty fail). There are, however, a number of practical difficulties associated with a mark-to-market accounting framework, notably, no ready market exists for many non-financial assets and liabilities. Consequently, valuations may be subjective and may be expensive to obtain.

The Financial Accounting Standards Board (FASB) has issued two statements addressing accounting for derivative securities:[372] **a.** FASB Statement No. 52, Foreign Currency Translation, which addresses accounting for foreign exchange forward contracts (including currency swaps); and **b.** FASB Statement No. 80, Accounting for Futures Contracts, which addresses accounting for financial and commodity forward contracts excluding foreign exchange contracts covered by Statement No. 52.

Generally Accepted Accounting Principles (GAAP), required for purposes of Y-9C reports and annual reports dictated under Section 112 of FDICIA, compel that certain off-balance sheet derivative instruments be marked to market (market value-based accounting) unless the instruments meet certain specified hedge accounting criteria.[373] If these criteria are met, the gains or losses associated with the instrument can be deferred and realized on a basis consistent with the income or expense of the item hedged (hedge accounting). This hedge accounting framework is derived from FASB Statements 52 and 80, as described above. For a transaction to qualify as a hedge, the following criteria are usually applied:[374]

- The position to be hedged and the hedging instrument are specifically identified and the relationship between them designated; and
- The hedging instrument is reasonably expected to be effective in reducing the risk of loss from changes in the value of the hedged instrument.

The effectiveness of the hedge should be monitored over time and if it ceases to be effective, hedge accounting should cease. Thus, hedge accounting is generally permitted in conjunction with a risk reduction strategy. If derivatives are used for any purpose(s) other than to reduce risks, mark-to-market or lower-of-cost-or-market

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[372] Sources: SEC, FED, OCC, and FDIC.

[373] Authoritative guidance of a general nature is provided by the FASB for foreign currency off-balance sheet instruments and for futures contracts. However, FASB standards do not explicitly address many other instruments such as interest rate swaps and commodity-based instruments. Definitive accounting standards for many derivatives have not been issued by the FASB.

[374] Source: Group of Thirty.

(LOCOM) accounting is required. Regulators and other standard-setting bodies need to provide clearer guidance on defining when risk management accounting is appropriate. Industry sources have indicated that until then, management will have to use its best judgment.

a. FASB Statement No. 52

Statement No. 52 requires hedge accounting for foreign exchange contracts or transactions that are intended to hedge identifiable foreign currency commitments if:

- The foreign currency transaction is designated as, and is effective as, a hedge of a foreign currency commitment; and
- The foreign currency commitment is firm.

b. FASB Statement No. 80

Statement No. 80 permits hedge accounting if:

- The item to be hedged exposes the enterprise to price or interest rate risk;
- The futures contract reduces that exposure and is designated as a hedge;
- At the inception of the hedge and throughout the hedge period, there is high correlation between the changes in the value of the futures contract and the value of the hedged item;
- The significant characteristics and expected terms of an anticipated transaction are identified; and
- It is probable that the anticipated transaction will occur.

Under Statement No. 80, use of hedge accounting requires the enterprise to perform an ongoing assessment of the effectiveness of the hedge throughout the life of the hedge. A significant difference between Statement No. 52 and Statement No. 80 is that No. 52 allows hedge accounting only for firm commitments, while No. 80 allows hedge accounting for anticipated probable transactions.

As mentioned before, many derivative products have developed for which no FASB Statements have been issued. In certain limited circumstances, guidance has been provided by the FASB through its Emerging Issues Task Force (EITF). Whether accounting methods for derivatives that are not addressed either by FASB Statements or an EITF issue consensus are acceptable depends on general accounting practice, and whether they are consistent with basic accounting tenets. Thus far, accounting principles applicable to derivatives have developed based largely on FASB Statement No. 52 and

Statement No. 80.[375]

6. DISCLOSURE TREATMENT FOR FINANCIAL DERIVATIVES

Disclosure issues[376] are as important, if not more important, than accounting issues. Flaws in the quality and quantity of information relating to derivative products or derivative activities can potentially lead to systemic problems, abuse in the markets, and general destabilization. Disclosure is particularly important for the derivative markets and the instruments contained within the markets because they are powerful tools, poorly understood, and their use is rapidly becoming common practice for financial management and risk-reduction strategy purposes.

There is widespread concern that organizations currently disclose too little information about their derivative transactions to present a fair assessment of the nature and extent of their activities or the risks to which they are exposed.[377] The use of derivatives can lead to risks and reward which far exceed the amounts recognized on financial statements. For example, the inherent risk exposure in OTC transactions is only recorded on the balance sheet at a fraction of worth, or total exposure impact on the firm using the transaction. The remainder of the exposure risk is recorded off-balance sheet. This type of arrangement represents a contingent asset or liability, the amount of which will depend on the movement of the underlying financial instrument; interest rates for example. Although regulations in many countries require footnote disclosure of capital commitments and contingencies, regulators and industry participants appear to provide too little disclosure about intrinsic off-balance sheet risks.[378]

It is also interesting to note that certain dealers with whom the Minority Staff spoke have decided to disclose more than is currently required. These dealers feel that more disclosure has benefited them as the risks associated with their derivative activities are less than others might imagine in the absence of such disclosures.

a. Views on Disclosure from the Regulatory Community

The primary regulatory financial statements for federally insured commercial banks and savings banks are the quarterly Reports of Condition and Income (Call Reports) and the quarterly Y-9C reports, filed by bank holding companies with the Federal Reserve.[379] Both reports are required to be filed in a manner consistent with GAAP.

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[375] In March 1992, the Chief Accountant of the SEC sent a letter to EITF representatives to affirm the SEC's position that hedge accounting is applicable only to transactions that reduce risk.

[376] See responses to Question #1 posed to the regulators by Representative Leach for additional information.

[377] Sources: Regulators, Group of Thirty, Industry Sources.

[378] Some participants have expressed concern that U.S. firms may be at a disadvantage relative to their foreign counterparts because accounting and disclosure standards are lower outside of the United States.

[379] Sources: Federal Reserve, SEC, FDIC, OCC.

Call and Y-9C reports, which are available to the public, disclose the notional values of foreign exchange and interest rate derivative instruments, including swaps, futures and forward contracts, option contracts, and similar contracts involving commodities and equities. Information on the replacement costs is also collected in both reports for the purpose of calculating risk-based capital requirements.

In addition to these financial statements, the Federal Financial Institutions Examination Council (FFIEC) 035 report collects information on individual bank foreign exchange positions and is widely used by examiners as a supervisory tool. The 035 report is filed at the end of each month by approximately 125 banks, bank holding companies and foreign bank branches in the U.S. with $1 billion or more in foreign exchange commitments. The report includes information on foreign exchange activity in the six major currencies[380] or currencies with has a position greater than $50 million.

The existing reporting framework is supplemented by information gained through the regulatory examination process. However, the growing complexity of the derivative markets have caused regulators to re-examine their informational needs.[381] A number of enhancements and initiatives are being considered, as follows.

(1) Section 112 of FDICIA

Beginning in 1994, reports filed pursuant to the mandate of Section 112 of FDICIA will provide additional insight into the derivative activities of banks and bank holding companies. Under Section 112, insured banks with total consolidated assets of $500 million or more will have to submit to the appropriate banking agency annual reports containing audited financial statements prepared in accordance with GAAP; alternatively, consolidated financial statements can be filed by the bank holding company. These publicly available annual reports will provide additional information on bank and bank holding company derivative positions.

As part of the above audited financial statements, banks and bank holding companies will be required to disclose additional information on their off-balance sheet financial instruments that have a risk of accounting loss.[382] The information to be disclosed includes:

(a) The face, contract, or notional principal amount;

(b) The nature and terms of the instruments along with a discussion of their

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[380] Japanese yen, Swiss franc, Deutsche mark, British pound, Australian dollar, and Canadian dollar.

[381] In particular, breaking down sources of income for banks and securities firms and matching income sources with different activities and financial instruments is a high priority for regulators. There are initiatives currently in place to require determination of and reporting of revenue for financial entities according to the precise source of such revenue.

[382] According to GAAP, the risk of accounting loss from a financial instrument includes (a) the possibility that a loss may occur from the failure of another party to perform according to the terms of a contract (credit risk), (b) the possibility that future changes in market prices may make a financial instrument less valuable or more onerous (market risk), and (c) the risk of theft or physical loss. Institutions are only required to disclose the information noted here for the risk of accounting loss that arises from credit risk and market risk.

credit and market risk, cash requirements, and related accounting policies;

(c) The accounting loss the entity would incur if any party to the financial instrument defaults and the collateral or other security, if any, for the amount due proved to be of no value to the entity; and

(d) The entity's policy for requiring collateral or other security on financial instruments it accepts and a description of collateral on instruments presently held.

In addition, banking organizations will disclose information about significant concentrations of credit risk from individual counterparties or groups of counterparties for all financial instruments, including derivatives. Furthermore, banking organizations will be required to disclose the fair value of financial instruments, including derivatives, for which it is practicable to estimate fair value. When estimating fair value is not practicable, then the banks must disclose descriptive information pertinent to estimating the value of these instruments.

Finally, under Section 112 of FDICIA, the federal banking agencies were given the authority to require that the audited annual reports of banking institutions include any disclosures, in addition to those required by GAAP, that were deemed necessary. The agencies are actively exploring whether additional disclosures should be required on derivative activities in these reports.

(2) Section 305 of FDICIA

On September 14, 1993, the federal banking agencies issued for public comment a Notice of Proposed Rulemaking on interest rate risk in response to Section 305 of FDICIA.[383] The agencies are proposing that an interest rate risk schedule be incorporated into the current Call Reports. The proposal envisions that there would be revisions to the Call Report to permit the agencies to collect the information necessary to monitor the level of interest rate risk and assess the need for additional capital at banks that may have significant exposures to interest rate risk.

The proposed interest rate risk schedule would require additional reporting of off-balance sheet positions which would be distributed among seven ranges or time banks and segregated into three categories. The three categories would be: those positions representing firm commitments (e.g., swaps, futures and forward-rate agreements); those positions exhibiting option characteristics (e.g., options, caps, floors and swaptions); and those commitments or derivative instruments whose value depends on the value of an underlying asset or index with amortizing characteristics. Specifically, off-balance sheet instruments would be reported in a manner which reflects their impact on the institution's overall interest rate risk portfolio. The proposal also advances a specific treatment for assessing the interest rate risk of derivative activities in the context of the overall interest rate risk of a bank.

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[383] See 58 Federal Register 48206. The comment period ended on October 29, 1993.

As proposed, institutions with a notional value of off-balance sheet interest rate contracts amounting to more than 10% of total assets would be required to report additional data on their derivative positions to enable supervisory assessment of the interest rate exposure of the positions and their contribution to the overall risk profile of the institution. The proposal also offers institutions an alternative approach by which to evaluate their interest rate risk, including risk related to derivative activities, that would allow such institutions to report the change in value of their assets, liabilities and off-balance sheet contracts under a specified interest rate scenario using the institution's own internal models. Such estimates, including the underlying assumptions used, would be subject to examiner review for acceptability prior to their use for capital adequacy purposes.

(3) Section 308 of FDICIA

Effective December 19, 1992, Regulation F implemented Section 308 of FDICIA, which required the Federal Reserve to prescribe standards to limit the exposure of insured depository institutions to other depository institutions. As implemented, Regulation F requires banks, savings associations, and branches of foreign banks with deposits insured by the FDIC to develop and implement internal prudential policies and procedures for evaluating and controlling credit exposure to depository institutions with which they do business. Regulation F is being enforced through the examination process.

(4) FFIEC Proposal on Implementing Section 121 of FDICIA

Section 121 of FDICIA requires the federal banking and thrift agencies to develop supplemental standards for disclosure of the fair market values of assets and liabilities of insured depository institutions. In April 1993, the agencies issued a proposal that would require institutions with total assets of $500 million or more to disclose the fair values (i.e., estimated market values) of their assets, liabilities, and off-balance sheet financial instruments in their audited annual reports. The FFIEC also released a proposal requesting comment on the feasibility of providing fair-value disclosures in bank Call Reports, perhaps using a condensed format. The agencies are currently reviewing the comments that the FFIEC received on this proposal.

(5) Financial Accounting Standards Board Interpretation No. 39

The federal banking agencies are considering adopting FASB Interpretation No. 39, Offsetting of Amounts Related to Certain Contracts, solely for balance sheet items arising from off-balance sheet derivative instruments. Adoption of FASB No. 39, which takes effect for financial statements issued for periods beginning after December 15, 1993, would improve the reporting of certain credit exposures arising from derivatives in bank Call Reports by clarifying the potential for inappropriate accounting netting practices. In addition, FASB No. 39 would permit entities to offset fair value amounts recognized for derivative contracts executed with the same counterparty under a master netting arrangement. If approved, the reporting guidance consistent with FASB No. 39 would become effective beginning with 1994 Call Reports.

b. Customer Disclosure Rules

Suitability requirements have been put in place, and will continue to be revised to ensure that derivative transactions entered into by various market participants are indeed suitable given their investment objectives and financial goals.

In addition to suitability requirements, broker-dealers are required, pursuant to Rule 9b-1 under the Exchange Act[384] and Form S-20 under the Securities Act of 1933,[385] to provide options customers with a risk disclosure document containing information describing the mechanics and risks of options trading, transaction costs, margin requirements, and the tax consequences of margin trading.

c. Views on Disclosure from Market Participants

Harmonization of international accounting standards is one of the issues most cited by industry sources regarding disclosure in the financial derivative markets. Broader consistency in the area will clarify many of the current concerns surrounding this issue. Until then, however, industry sources[386] have outlined several voluntary disclosure measures which would apply to all categories of financial instruments, including derivatives.[387] Such suggested measures are outlined below.

(1) **Qualitative Information Should be Disclosed in the Management Discussion and Analysis (MD&A) of the Annual Report by Dealers and End-Users. Information Should Include:**

- Details on management's attitude to all types of financial risk;
- The purposes for which financial instruments are used and the extent of proprietary trading, including speculation. Recommendation #4 of the Group of Thirty Report, Identifying Revenue Sources, would isolate sources of revenue and allow dealers to develop a more refined understanding of the risks and returns of derivative activities. The G30 Survey indicates that few dealers currently identify individual sources of revenue. The G30 Report suggests that this should become a more common practice, and regulators and analysts concur; and
- Details on how risks are monitored and controlled and, for dealers, information about market risk and the adequacy of capital resources to support the level of activity.

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[384] 17 C.F.R. § 240.9b-1.

[385] 17 C.F.R. § 239.20

[386] Group of Thirty, Derivatives: Practices and Principles, Washington, D.C., July 1993.

[387] Many of the following disclosures already appear in the financial statements of market participants, but very few make all the suggested disclosures.

(2) **Accounting Policies and Quantitative Information to be Disclosed in the Footnotes to the Financial Statements by Dealers and End-Users Should Include the following Information:**

- Detailed descriptions of accounting policies used to account for financial instruments;
- Analysis of the size of positions in financial instruments both on and off the balance sheet. For those financial instruments not recognized in the financial statements at market value, the market value should be disclosed; and
- Analysis of the credit risk inherent in the positions. Disclosure of this information should contain:
  - (a) The amount that best represents the organization's current credit risk exposure;
  - (b) The organization's policy with respect to obtaining collateral; and
  - (c) Details on significant concentrations of credit risk.

(3) **Additional Disclosure in the Footnotes of Dealers Should Include the Following Information:**

- Details on regulatory capital. For example, the amount of regulatory risk capital equivalent to each category of financial assets; and
- Analysis of revenue relating to financial instruments in sufficient detail to enable an understanding of the extent of the organization's activities. For a major dealer, trading revenue must be broken down into separate categories (e.g., from swaps, from debt instruments, from foreign exchange, from equities etc.).

The above proposed disclosures do not include a quantitative disclosure on the level of market risk. Recommendations on this topic were obtained from the regulators,[388] and are outlined below.

d. Disclosure for Market Risk

Enhanced levels of disclosure[389] are desired by market participants, as they are reluctant to accept counterparties that do not provide a meaningful and representative measure of, and sufficient information regarding their creditworthiness. However, there are a number of considerations which present significant challenges to disclosing

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[388] Principally the Federal Reserve Board and the Securities and Exchange Commission. Also see responses to Question #1c posed to the regulators by Representative Leach.

[389] Traditionally, GAAP has not required disclosure of information that would facilitate evaluation of market risk exposure.

exposures to market risk. One reason for this is the potential burden that such disclosure might entail.[390] Institutions may also have reservations about representing disclosure of market risk as the "appropriate level of risk" because such information may have shortcomings and reflect many assumptions made in the interest of minimizing regulatory burden.

Nevertheless, difficulties associated with disclosure of market risk are not insurmountable, and the regulatory bodies generally believe that greater efforts need to be directed toward this aspect of financial disclosure. The FED noted that in particular, methods for reporting meaningful assessments of "value-at-risk" need to be fully explored. In addition, the FED has encouraged institutions to disclose both qualitative and quantitative measures of market risk, and believes that more institutions will increase their disclosures as consensus builds regarding this issue.

As one measure, FASB recently released Statement No. 107, Disclosures about Fair Value of Financial Instruments (December 1991), requiring enterprises to disclose the fair value of all financial instruments whether on- or off-balance sheet. Although FASB 107 does not require disclosure of the nature and terms of derivatives or other financial instruments, the fair value disclosures that are required provide an indication that the enterprise is exposed to market risk.

SEC regulations applicable to financial reporting exceed requirements under GAAP by requiring disclosure of information that is indicative of a registrant's market risk exposure from on-balance sheet items.[391] For example, Article 5 of Regulation S-X[392] requires disclosure of the general character of each type of short- and long-term debt instrument, including interest rate and maturity date. Industry Guide 3,[393] which identifies certain statistical information that must be disclosed by financial institutions, requires disclosure of average balances of each major category of interest-bearing asset and liability, including disclosure of average and year-end yields on each major class of interest-bearing asset and liability. The information required by Regulation S-X and Industry Guide 3 provides insight into the market risk to which a registrant is exposed through its major on-balance sheet lending and investing activities.

Additionally, Item 303 of Regulation S-K,[394] Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A), requires registrants to discuss information about liquidity, capital resources, and results of operations that the registrant believes is necessary to an understanding of its financial condition, cash flows, and results of operations. This very broad requirement is intended to elicit disclosure about transactions or other factors which are not required by GAAP. Specifically, Item

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[390] Particularly for banking or other financial institutions that make little or no use of derivative instruments. The FED stated that care is being taken to ensure that any reporting changes are appropriately targeted and do not cause undue reporting burdens. On the other hand, the FED noted that financial institutions with a notional value of derivative contracts in excess of 10% of assets would be required to report expanded data to enhance the supervisory assessment of market risk.

[391] Source: SEC responses.

[392] 17 C.F.R. § 229.210.5.

[393] Regulation S-K, Items 801 and 802. 17 C.F.R. §§ 229.801 and 229.802.

[394] 17 C.F.R. § 229.303.

303(a)(3)(ii) requires registrants to "describe any known trends or uncertainties that have had or that the registrant reasonably expects will have a material favorable or unfavorable impact on net sales or revenues or income from continuing operations." This provision would require a registrant to disclose the existence of derivatives that are reasonably expected to have a material impact on future income.

7 TAX ISSUES

Concerns have been raised that certain tax laws and regulations disadvantage the use of derivatives in risk management strategies. Tax impediments include the inconsistent or uncertain tax treatment of gains and losses on the derivatives, in comparison with the gains and losses that arise from the risks being managed.

Under the tax code, capital gains or losses arise from the sale or exchange of property which is a capital asset. In 1988, the Supreme Court in Arkansas Best advanced a literalist interpretation of the definition of capital asset, thereby narrowing the exceptions to that definition so that many transactions in derivatives would be viewed as giving rise to capital gains or losses rather than ordinary income. This decision created significant concern and uncertainty in the financial markets over the tax treatment of hedging transactions. Prior to that case, taxpayers had assumed, relying in part on a earlier Supreme Court case, Corn Products, that financial instruments used to hedge business risks would receive ordinary tax treatment if they had been purchased for a business purpose, while Arkansas Best seemed to suggest that many hedging transactions would give rise to capital losses that could not be offset against ordinary income. In other words, a taxpayer could be liable for taxes on a transaction that generates no net income. The CFTC supports addressing the uncertainty engendered by the IRS's interpretation of the Arkansas Best case.

The recent Tax Court decision in FNMA v. Commissioner has provided some comfort to the financial markets by interpreting Arkansas Best to permit the statutory exceptions to the definition of capital asset to be construed liberally. The Tax Court further concluded that even property that does not fall within any of the statutory exceptions should receive ordinary tax treatment if it is "integrally related" to the underlying property which is excluded.

The decision in FNMA has not resolved all of the uncertainty, however, and legislative or administrative action may be appropriate. Absent such action, for instruments or transactions about which the tax law is unclear, taxpayers are in the position of taking a gamble as to the ultimate tax treatment. Further, where ordinary income treatment is not available, the benefits of hedging as a risk-reducing tool are decreased.

F. SUPERVISORY PROPOSALS FOR FINANCIAL DERIVATIVES

Various proposals relating to financial derivatives have been introduced for comment. Each of these proposals has been discussed in other sections of this report, and consequently, a summary of each proposal is set forth below. References are made to other sections of this report where the proposals are explained in greater detail.

1. BASLE COMMITTEE ON BANKING SUPERVISION SUPERVISORY PROPOSALS ON NETTING AND MARKET RISKS, AND ON THE MEASUREMENT OF INTEREST RATE RISKS

In April 1993, the Basle Committee on Banking Supervision,[395] (the Committee) under the Chairmanship of E. Gerald Corrigan, former President of the Federal Reserve Bank of New York, issued a package of supervisory proposals dealing with netting[396] and market risks,[397] together with an approach for the measurement of interest rate risk.[398]

2. BANKING AGENCY PROPOSALS

The banking agencies have issued various proposals regarding capital, accounting, and disclosure relating to derivatives.

a. Section 112 of FDICIA and related Disclosures

Beginning in 1994, reports filed pursuant to the mandate of Section 112 of FDICIA will provide additional insight into the derivative activities of banks and bank holding companies. Certain insured banks will have to submit to the banking agencies annual report containing audited financial statements prepared in accordance with GAAP; alternatively, consolidated financial statements can be filed by the bank holding company under certain conditions.[399] Banks and bank holding companies will be required to disclose additional information on their off-balance sheet financial instruments that have a risk of accounting loss.

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[395] The Basle Committee on Banking Supervision is a Committee of banking supervisory authorities which was established by the central bank Governors of the Group of Ten countries in 1975. It consists of senior representatives of bank supervisory authorities and central banks from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, Netherlands, Sweden, Switzerland, United Kingdom, and the United States. It usually meets at the Bank for International Settlements in Basle.

[396] Netting is an agreed offsetting of positions or obligations by trading partners or participants in a system. The netting reduces a larger number of individual positions or obligations to a smaller number of positions.

[397] Proposals for instituting specific capital charges to open positions in foreign exchange (Proposal for Foreign Exchange Risk) are contained within the proposals for market risk.

[398] For more information on these proposals, see Section E.4.a.(2)(c): Basle Committee Proposals.

[399] For more information on this disclosure proposal, see Section E.6.a.(1): Section 112 of FDICIA.

b. Section 305 of FDICIA Regarding Interest Rate Risk and related Disclosure and Capital Standards

On September 14, 1993, the Federal Reserve, OCC, and FDIC issued for public comment a Notice of Proposed Rulemaking[400] on interest rate risk in response to Section 305 of FDICIA. Information related to interest rate risk (IRR) exposures of derivatives would be disclosed and evaluated under proposed revisions to risk-based capital standards. The proposed rule also solicited comment on two alternative methods for determining the amount of capital a bank may need to account for IRR. The comment period ended on October 29, 1993.[401]

c. FFIEC Proposal on Implementing Section 121 of FDICIA and Related Disclosures

Section 121 of FDICIA requires that the federal banking and thrift agencies develop supplemental standards for disclosure of the fair market values of assets and liabilities of insured depository institutions. In April 1993, the agencies issued a proposal that would require institutions with total assets of $500 million or more to disclose the fair values of their assets, liabilities, and off-balance sheet financial instruments in their audited annual reports. The agencies are also considering an FFIEC proposal on the feasibility of providing fair value disclosures in bank Call Reports.[402]

d. Financial Accounting Standards Board Interpretation No. 39 and Related Disclosures

The federal banking agencies are considering adopting FASB Interpretation No. 39, Offsetting of Amounts Related to Certain Contracts, for balance sheet items arising from off-balance sheet derivative instruments. Beginning in 1994, the interpretation would permit netting to the extent that the agreements governing the relationship between the parties contain a legally enforceable netting provision. The agencies plan to revise the Call Report instructions to allow banks to apply the offsetting provisions of Interpretation No. 39 that are applicable to derivatives.[403]

e. OCC Proposed Rule on Collateralized Transactions and Related Capital Standards

The OCC published a Notice of Proposed Rulemaking on Collateralized Transactions which would amend the risk-based capital guidelines to lower the risk weight from 20% to 0% for particular transactions that are collateralized by cash or

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[400] 58 Federal Register 48206.

[401] For more information on the disclosure proposal, see Section E.6.a.(2): Section 305 of FDICIA. For more information on the capital proposal, see Section E.4.a.(2)(a): Banking Agency Proposal for Interest Rate Risk.

[402] For more information on this disclosure proposal, see Section E.6.a.(4): FFIEC Proposal on Implementing Section 121 of FDICIA.

[403] For more information on this disclosure proposal, see Section E.6.a.(5): FASB Interpretation No. 39.

government securities.[404]

3. SECURITIES AND EXCHANGE COMMISSION PROPOSALS REGARDING THE NET CAPITAL RULE (INCLUDES SIA PROPOSALS)

The SEC issued for comment the SEC Net Capital Concept Release No. 34-32256 dated May 4, 1993.[405] One approach under consideration would involve maintaining the current net capital rule. A second approach would devise capital requirements that comprehensively address the credit and market risks posed by derivative products so that firms could conduct their derivative activities in registered broker-dealers without what they often regard as undue capital constraints. A third approach, which could be combined with either of the first two approaches or implemented separately, would be to formulate separate capital guidelines that would specifically apply to DPCs that are registered broker-dealers.

4. CFTC RECOMMENDATIONS

The Commodity Futures Trading Commission released a report in October 1993 entitled OTC Derivative Markets and Their Regulation as required by the Futures Trading Practices Act of 1992 (P.L. 102-546).[406] While the report did not include any formal legislative or regulatory proposals, it did contain a Recommendations section.

The CFTC supports the establishment of an interagency council to foster additional regulatory coordination in the area of OTC derivatives.[407]

5. GROUP OF THIRTY STAFF PROPOSAL FOR CAPITAL ADEQUACY REGULATION

A staff member of the Group of Thirty, Charles Taylor, has set forth a proposal for bank capital standards entitled A New Approach to Capital Adequacy Regulation dated May 1993. This proposal suggests a new framework for assessing capital adequacy that would substitute for the current risk-based capital requirements set forth in the Basle Accord.

The proposal by Mr. Taylor ("the Taylor proposal") would set forth a capital calculation based upon income volatility, rather than type of asset as does the Basle Accord. Mr. Taylor begins the discussion of his proposal by stating that anecdotal

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[404] For further information, see Section E.4.a.(2)(b): OCC Proposal on Collateralized Transactions.

[405] For more information on this Concept Release, see Section E.4.b.(1): Current and Proposed Capital Standards. For comments received by the SEC on the concept release, see Question #26 posed to the SEC by Representative Leach.

[406] For further information, see Section I.2.: Commodity Futures Trading Commission.

[407] The OCC also suggested recently the creation of a task force to address certain derivative issues. See speech of Eugene Ludwig, Comptroller of the Currency, before the Institute of International Bankers, September 27, 1993.

evidence suggests that income from derivative dealing is more stable than income from other more traditional banking activities: to date at least, global derivative departments seem to have managed their risks quite well. The Minority Staff does not express any views concerning Mr. Taylor's proposal at this time.

G. RECENT CONGRESSIONAL ACTION REGARDING FINANCIAL DERIVATIVES

Congressional interest in financial derivatives centers around legislation proposed and formalized in the 102nd and 101st sessions of Congress. The following legislative items each contain provisions relating to financial derivatives.

1. THE FUTURES TRADING PRACTICES ACT

The Futures Trading Practices Act (P.L. 102-546) was signed into law on October 28, 1992.[408] The Futures Trading Practices Act (the Act) contains four relevant provisions.

a. Margins on Stock Index Futures

Section 501 of the Conference Report amends Section 2(a)(1)(B) (7 U.S.C. § 2a) of the Commodity Exchange Act (CEA) to require that any contract market in a stock index futures contract (or option thereon) to file with the Federal Reserve Board (FED) any rule setting or changing levels of margin for such contract. The FED may at any time request the contract to set margin for any stock index futures contract (or option thereon) at such levels as the FED determines are appropriate to preserve the financial integrity of the market or to prevent systemic risk. The FED may delegate any or all of its authority under this provision to the CFTC.

b. Exemption Authority for the CFTC

Section 502 of the Conference Report amends Section 4(c) of the Act (7 U.S.C. § 6) to authorize the CFTC, in order to promote responsible economic or financial innovation and fair competition, to exempt any agreement, contract or transaction (including persons or class of persons involved in the transactions), or class thereof, from the exchange-trading or any other requirements of the Act, except for Section 2(a)(1)(B) of the Act. The CFTC must determine that the exemption would be: (a) in the public interest, (b) consistent with the purposes of the Act, and (c) entered into solely between appropriate persons. "Appropriate persons" is defined in the Act broadly, but does include the following: banks; broker-dealers; insurance companies; investment companies; futures commissions merchants (FCMs); government entities; corporations with a net worth over $1 million; and other persons the CFTC determines to be appropriate in light of their financial qualifications.

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[408] The House of Representatives approved the Conference Report on H.R. 707 by voice vote on October 2, 1992. The Senate agreed to the Conference Report by voice vote on October 8, 1992.

c. Hybrid and Swap Exemptions

Section 502 also authorizes the CFTC in Section 4(c)(5)(A) and (B) of the Act to exempt "hybrid instruments that are predominantly securities or depository instruments" and "classes of swap agreements that are not part of a fungible class of agreements that are standardized as to their material economic terms."

Based on this section and report language in the Conference Report, the CFTC, on January 22, 1993 (58 FR 5587) adopted a final rule exempting swaps from all provisions of the CEA subject to the provisions outlined in the statute.

The CFTC also adopted a final rule on January 22, 1993 (58 FR 5580) exempting certain hybrid instruments from all provisions of the Act. Bank instruments such as demand deposits, time deposits or transaction accounts based on a commodity component (e.g., a CD that goes up or down based on the price of gold) would be exempt if "the commodity dependent value" is less than the "commodity independent value."

d. Risk Assessment for Holding Companies

Section 229 of the Conference Report requires FCMs to obtain such information and keep such records on affiliates as required by the CFTC. In the case of a FCM that is affiliated with a depository institution, if the merchant utilizes for the recordkeeping or reporting requirement copies of reports filed by the affiliate with a federal banking agency, it will be in compliance with this section.

If the CFTC determines that supplemental reports are required because of "potential risks" to the futures merchant, the CFTC is required to first consult with the appropriate federal banking agency, and determine if the information is available from the agency, unless any delay from consultation would be "inconsistent with...stability."

2. FEDERAL DEPOSIT INSURANCE CORPORATION IMPROVEMENT ACT OF 1991

The Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA), Public Law 102-242, was signed into law on December 19, 1991. FDICIA contains several provisions which are relevant to financial derivatives.

a. FDICIA Netting Provisions

FDICIA contains a provision regarding the netting of obligations between financial market participants in the event that one of the participants fails. The U.S. Bankruptcy Code and the Financial Institutions Reform Recovery and Enforcement Act (FIRREA) contain related provisions. The FED expressed that it may be desirable to have a single standard for determining what types of netting contracts are covered. Uniformity in this area would help provide certainty to financial market participants

regarding the extent of netting coverage.[409]

The FDICIA netting provisions validate both bilateral and multilateral netting in the event of a default, and are designed to promote efficiency and reduce risk in the financial markets. The provisions apply to financial institutions[410] and to clearing organizations whose members are financial institutions. The FDICIA netting provisions apply broadly to any netting contract governed by federal or state law that provides for netting present or future payment obligations (including liquidation or close-out values) among the parties to the contract. In addition, the netting provisions apply to all valid netting contracts between covered parties, notwithstanding any other provision of law.

b. Regulatory Provisions

FDICIA contained several regulatory provisions that have a direct effect on the supervision of derivative activities. These include the following:

- **Section 305:** Notice of Proposed Rulemaking on interest rate risk.
- **Section 308:** Regulation F, implementing Section 308, required the FED to prescribe standards to limit the exposure of insured depository institutions to other depository institutions.
- **Section 121:** Requires that the federal banking and thrift agencies develop supplemental standards for disclosure of the fair market values of assets and liabilities of insured depository institutions.
- **Section 112:** Provides additional insight into the derivative activities of banks and bank holding companies.

3. FINANCIAL INSTITUTIONS REFORM, RECOVERY AND ENFORCEMENT ACT

The Financial Institutions Reform, Recovery and Enforcement Act (FIRREA), Public Law 101-73, is federal legislation passed in 1989 providing government funds to insolvent savings and loans, and mandating sweeping changes in the examination and supervision of savings and loans and other insured institutions. The Act required insured institutions to adopt new capital standards; transferred the regulatory powers of the Federal Home Loan Bank Board to a new agency (the OTS); and placed the 12 district Federal Home Loan Banks under control of an oversight board, the Federal Housing Finance Board. The Act also abolished the defunct Federal Savings and Loan Insurance Corporation (FSLIC).

Similar to FDICIA, FIRREA contains provisions regarding the netting of

[409] Source: Federal Reserve Board.

[410] According to the Federal Reserve, financial institutions are defined as depository institutions, securities brokers or dealers, futures commission merchants, or other institutions as determined by the Federal Reserve.

obligations between financial market participants in the event that one of the participants fails. Unlike FDICIA, however, FIRREA does not cover both bilateral and multilateral netting.

FIRREA amended the Federal Deposit Insurance Act to allow parties to liquidate or net obligations under a qualified financial contract[411] when the counterparty is a depository institution for which the Federal Deposit Insurance Corporation (FDIC) has been appointed receiver. Unlike the FDICIA provisions, FIRREA allows netting by any party to a contract with a failed depository institution, not just by financial institutions. However, the FIRREA definition of qualified financial contract is narrower than the FDICIA netting contract definition. It is not clear whether the FIRREA provisions would apply to federal funds transactions or spot contracts, as would the FDICIA provisions.[412]

FIRREA also has a provision which prevents "cherry-picking" between swap Master Agreements.[413] The provision states that "any Master Agreement for any agreements described in clause (vi)(I) [swap agreement] together with all supplements to such master agreement shall be treated as 1 swap agreement." In other words, the provision contained in Section 212 of FIRREA prevents discriminatory selection of contracts in different Master Agreements.

4. MARKET REFORM ACT

The Market Reform Act of 1990, Public Law 101-432/,104 Stat. 978, required that regulatory agencies collect information from financial entities to evaluate risk management systems. Pursuant to this Act, the SEC adopted risk assessment recordkeeping and reporting rules that provide SEC with an overview, on a periodic basis, of the financial and securities activities of affiliates that are likely to have a material impact on a broker-dealer's financial and operational condition. In addition, broker-dealers are required to file with the SEC records concerning their policies, procedures, and systems for monitoring and controlling financial and operational risks resulting from the activities of their affiliates.

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[411] A Qualified Financial Contract means any securities contract, commodity contract, forward contract, repurchase agreement, swap agreement, or similar agreement as determined by the Federal Deposit Insurance Corporation.

[412] Source: Federal Reserve Board.

[413] Section 212 (e)(8)(D)(vii), "Treatment of Master Agreement as 1 Swap Agreement."

H. CASE STUDIES INVOLVING DERIVATIVES

This section reviews and interprets select recent case studies which involve financial derivatives.

Part 1 discusses two cases in which a company was sued for not using derivatives.

Part 2 examines how derivative contracts were unwound when a counterparty failed or encountered difficulty.

1. COMPANIES SUED FOR NOT USING DERIVATIVES

a. Grain Co-op Sued by Shareholders for Not Hedging their Grain

In Brane vs. Roth, 590 N.E.2d 587 (Ind. Ct. App. 1992) the Court of Appeals of Indiana affirmed a trial court's finding that the board of directors of a grain cooperative breached their fiduciary duty in failing to adequately supervise the manager of the cooperative and become aware of the essentials of hedging.

The shareholders of a grain Co-op, called the Lafontaine Grain Co-op, brought action against the directors of the Co-op for losses the Co-op suffered in 1980 due to the directors' failure to protect its position by adequately hedging in the grain market. The Superior Court of Miami County entered judgment in favor of the shareholders.

In this derivative action, the trial court held that the directors were liable for retaining a manager inexperienced in hedging and for failing to attain knowledge of the basic fundamentals of hedging to be able to direct the hedging activities.

The Co-op had over $7 million in grain sales and hedged only $20,500 in grain contracts. The lack of hedging was found to be the proximate cause of the Co-op's $424,000 loss.

The directors appealed the decision, and the appeal was taken by the Court of Appeals of Indiana. The Court of Appeals of Indiana upheld the lower court's decision in favor of the shareholders on June 1, 1992.

b. Action Brought Against Computer Company for Lack of Currency Hedging

The absence of adequate hedging to guard against financial loss has also been used in a derivative class action against the board of directors of Compaq Computer Corporation in a pending action in federal court in the Southern District in Texas filed in 1991.

In the complaint, the class alleges that the Board made false statements regarding the operations and outlook for Compaq. The Board also failed to disclose, among other things, that Compaq lacked sufficient and adequate foreign currency hedging mechanisms

to insulate Compaq from appreciation in the value of U.S. dollar in foreign currency. Compaq at the time of the complaint derived 54% of its revenues from foreign sales.

This lawsuit has not come to trial.

2. CASE STUDIES INVOLVING FAILED OR FAILING COUNTERPARTIES

a. Drexel Burnham Lambert[414]

Drexel Burnham Lambert Group Inc. (DBL Group), and its swap subsidiary, DBL Products, went bankrupt in 1990 at which time they were the counterparty in a number of derivative contracts. According to industry participants and regulators involved, the contracts were unwound, or settled, "smoothly" with the cooperation of the other counterparties involved. The unwinding process was accomplished without apparent adverse effects on domestic and foreign financial markets, and no taxpayer money was lost.

Because DBL Group filed for bankruptcy, most counterparties to DBL Product's swap transactions were not, under the terms of the swap agreements, obligated to pay the money they owed since DBL Products technically defaulted on the swaps. However, virtually all counterparties paid Drexel the money they owed for various reasons described below. Many counterparties had unwound their contracts with Drexel upon anticipation of the failure. When Drexel began having financial difficulties in February 1990, the SEC, the CFTC, the Federal Reserve Bank of New York, and the National Association of Securities Dealers (NASD) oversaw the unwinding of the activities of Drexel, including the derivative activities. To the extent that derivative activities were conducted in Drexel's registered broker-dealer, the SEC was able to wind down these contracts in an orderly manner, without any cost to U.S. taxpayers. The agencies did not, however, closely monitor Drexel's unwinding of its swap agreements, as the swaps were in an unregistered affiliate. According to industry participants involved, however, the various financial markets were generally unaffected by Drexel's unwinding activities.

The failure of Drexel was a stimulus behind the passage of the Market Reform Act of 1990[415] which gave the SEC the ability to monitor the activities of broker-dealer unregistered affiliates under rules implementing a risk assessment program. Today, the SEC receives standardized regulatory reports regarding the financial activities of broker-dealer holding companies and their affiliates under the risk assessment program, including information on derivative activities.

In addition, the bankruptcy case of DBL Products was initiated prior to the June 25, 1990 effective date of amendments to the Bankruptcy Code concerning the treatment

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[414] See also Question #12b regarding Drexel posed to the SEC and the CFTC and Question #12a posed to the regulators by Representative Leach regarding the treatment of derivatives under the Bankruptcy Code, FDICIA, and FIRREA.

[415] P.L. 101-432.

of swap transactions."[16] The unwinding of DBL Product's swaps portfolio was therefore accomplished in accordance with legal authority existing before the effective date of these amendments.

DBL Group conducted its swap trading activities though DBL Products. DBL Products was engaged in the business of providing interest rate risk management strategies and acted as principal in interest rate swap transactions. Virtually all swap contracts entered into by DBL Products designated its parent, DBL Group, as guarantor of DBL Products performance under the contract. The contracts provided further that the guarantor's filing for bankruptcy constituted a default by DBL Products, giving rise to termination rights of DBL Products' counterparties.

The DBL Group Board of Directors filed for Chapter 11 for DBL Group on February 13, 1990. DBL Products, however, and two other Drexel subsidiaries decided not to commence bankruptcy proceedings at that time, and instead DBL Group publicly announced its intention to cause its subsidiaries to wind-down their respective operations in order to maximize the value of their respective assets and minimize respective liabilities.

On February 13, 1990 DBL Products had a swap book with customers consisting mostly of savings and loan institutions as well as other dealers and corporate end-users. Many of these savings and loans had low credit ratings and were required to post collateral under their swap agreements.

Virtually all of DBL Product's swap agreements reportedly included a limited two-way payments clause ("walk-away" clause), which permitted the non-defaulting party to walk away from its obligations. DBL Group's bankruptcy filing placed DBL Products in default and gave most of its non-defaulting counterparties the right to rely on the contract's walk-away clause and not pay DBL Products the money owed to it. Over 70% of DBL Product's counterparties owed DBL Products money. Nevertheless, only a handful of DBL Product's counterparties took advantage of the walk-away clause and instead paid DBL Products the money owed to it. According to the CFTC, this was due to a number of factors.

First, although DBL Products was technically in default under its swap contracts, it was not yet in bankruptcy, and thus remained free to aggressively negotiate settlements with its counterparties without the limitations of the automatic stay.[17] This Drexel did with great success. Second, as to the 70% of the counterparties who owed DBL Products money under swap contracts (counterparties who were "out-of-the-money"), DBL Products reportedly threatened to challenge the counterparties' right to "walk away" through litigation. Unresolved questions about the enforceability of the walk away clause and the prospect of lengthy and expensive litigation were powerful incentives for

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[16] These amendments provide protection for parties to swap transactions when their counterparty becomes the subject of bankruptcy proceedings under the Code. Specifically, under the amendments, such parties are permitted to cause liquidation of swap transactions with the bankrupt counterparty and to apply rights of offset. They are also protected from preference actions to recover prebankruptcy transfers. 11 USC §§101(55), 362(b)(14).

[17] The automatic stay provision of the Bankruptcy Code, 11 USC §362, stays the commencement or continuation, including the issuance of process of a judicial, administrative action or other proceeding against the debtor that was or could have been commenced before the commencement of the bankruptcy case, or to recover a claim against the debtor that arise before the commencement of the bankruptcy.

counterparties to negotiate with DBL Products. Third, in addition to these concerns, many DBL Products' counterparties also entered swap transactions with other "big players" in the OTC swap markets and feared that these institutions would be less likely to do business with them in the future if they sought to take advantage of their walk away clause with Drexel. DBL Products recovered 100 cents on the dollar from most counterparties owing DBL Products money under their contracts.

DBL Products also reportedly threatened counterparties that were owed money by DBL Products (counterparties who were "in-the-money") with the prospect that the DBL Products might file for bankruptcy protection. Such a filing might have significantly delayed recovery by those counterparties and have resulted in smaller payouts than were then being offered by DBL Products. DBL Products paid to such counterparties approximately 70-75% of the agreement value of the contracts.

DBL Products' traders were able to dispose of 90% of the firm's swaps portfolio within two months after the unwind process had begun, without apparent adverse effects on the financial markets. DBL Products filed for Chapter 11 on May 29, 1990. Between February 13, 1990 when DBL Group filed Chapter 11 and May 29, 1990, DBL Products had unwound almost its entire swap portfolio.

b. The Bank of New England[418]

On January 6, 1991, federal regulators seized the Bank of New England (BNE) and its subsidiaries. BNE, with $22 billion in assets, was the country's 33rd largest banking company. According to regulators, BNE's troubles were caused primarily by its aggressive real estate lending in a local economy that subsequently declined. At the time it failed, BNE was the counterparty in a number of derivative contracts. According to industry sources, the contracts were unwound, or settled, "smoothly" with the cooperation of the other counterparties involved. No significant losses, if any, were incurred by any party.

According to the FDIC, all derivative contracts in the BNE case met the legal definition of "qualified financial contracts"[419] and were transferred to the bridge banks that were formed to absorb certain assets, liabilities and off-balance sheet obligations of the failed bank and its subsidiaries. The effect of this transfer was to have the FDIC temporarily step in as counterparty in place of the failed institution. Generally, this process of timely notification and other requirements of the FDI Act was, according to the FDIC, carried out without any problems.

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[418] See also Question #12b posed to the FDIC by Representative Leach regarding BNE, and Question #12a posed to the regulators regarding the treatment of derivatives under the Bankruptcy Code, FDICIA, and FIRREA.

[419] The provision in FIRREA (12 USC 1821(e)(8)(D)(vi)) allows parties to liquidate obligations under a "qualified financial contract" when the counterparty is a depository institution for which the FDIC has been appointed receiver. The provision establishes the enforceability of the netting provisions of master agreements with respect to "qualified financial contracts" in the insolvency proceedings of an insured depository institution. FIRREA allows netting by any party to a contract with a failed depository institution, not just by financial institutions. A "qualified financial contract" includes any securities contract, commodity contract, forward contract, repurchase agreement, swap agreement, or similar agreement as determined by the FDIC.

c. Salomon Brothers[420]

In 1991, Salomon Brothers reportedly faced the withdrawal of certain uncommitted credit lines and, for a period of time, certain funding difficulties resulting from the Treasury auction issue.[421] At that time, Salomon was the counterparty in a number of derivative contracts.

According to the SEC, despite its Treasury auction violations and the related investigation and penalties, Salomon was able to meet all of its existing obligations to customers and creditors, including those involving derivative products. After disclosure of its Treasury auction violations, however, the number of new interest rate swaps into which Salomon entered declined. This may have been a result of counterparties' reluctance to do business with a firm whose long-term prospects at that time had been called into question. Nevertheless, according to the SEC, it does not seem that Salomon's ability to satisfy its ongoing obligations was adversely affected by its involvement in the Treasury auction issue.

The Treasury auction issue did not result in any CFTC action against Salomon for violations of CFTC regulations governing futures trading. Salomon's compliance with financial requirements, such as segregation of customer funds and maintenance of adequate net capital, was monitored by its designated self-regulatory organization (DSRO). The CFTC in turn was in frequent contact with the DSRO on the situation. The DSRO also did not report that Salomon Brothers was unable to comply with CFTC financial requirements at any time during that period.

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[420] See also Question #12c posed to the SEC and CFTC by Representative Leach regarding Salomon.

[421] On August 9, 1991, Salomon Brothers, Inc. announced that it had reported to the appropriate government agencies the discovery of violations of law and other irregularities in certain bids that it had submitted in several auctions of U.S. government securities during the previous year. On May 20, 1992, Salomon settled the Treasury auction investigation by paying a $290 million fine, agreeing to an SEC injunction and administrative order, and being suspended from trading activity with the Federal Reserve Bank for two years. Other investment banks were also fined on similar charges.

I. STUDIES

1. GROUP OF THIRTY REPORT -- DERIVATIVES: PRACTICES AND PRINCIPLES

The Group of Thirty sponsored a study on derivatives entitled Derivatives: Practices and Principles (the "Study") released on July 21, 1993.[422] The authors of the report included senior managers from firms that are dealers and end-users of derivatives, and individuals from the related legal, accounting, and academic disciplines. Those who participated in the preparation of the Study were from North America, Europe and Japan. The Study focuses almost exclusively on Over-the-Counter (OTC) derivatives, vs. exchange-traded derivatives.

The Study consists of a Recommendation section which sets forth 20 recommendations for industry practitioners and 4 recommendations for legislators and regulators. The Study also contains an Overview of Derivative Activities, and three Appendices.

The Overview of Derivatives section defines derivatives and discusses the related risks and risk management. The Overview also discusses the uses of derivatives, includes examples of such use, and quantifies the growth and composition of derivative activities.

The Appendices contain the Study's detailed background materials. Appendix I contains the six working papers that form the basis of the Study and whose analysis supports the Recommendations. Appendix II is a compilation of legal memoranda discussing issues of enforceability in the jurisdictions in nine countries. Appendix III is reported to summarize the findings of the Survey of Industry Practice conducted for the Study; a group of 80 dealers and 72 end-users responded to a questionnaire. Appendix III has curiously yet to be released by the Group of Thirty.

For a more detailed explanation of the Group-of-Thirty Sponsored Study, see **Appendix H.**

2. COMMODITY FUTURES TRADING COMMISSION

The Conference Report for the Futures Trading Practices Act directed the Commodity Futures Trading Commission (CFTC) to conduct a study with the cooperation and in consultation with the SEC and the Federal Reserve on the risks, size, scope, and so forth of derivatives and on the need for regulation.

On October 25, 1993, the CFTC released the above-referenced study, OTC Derivative Markets and Their Regulation, as required by the Conference Report to

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[422] In the Forward of the Study, the Chairman of the Group of Thirty, Mr. Paul Volcker, states: "The Recommendations for the management of derivative activity have the unanimous endorsement of the Steering Committee [of the Study]. While the Study has been sponsored and supported by the Group of Thirty, I should note that, as with all our study group reports, it does not represent an official view of the Group [of Thirty]. Nor does it necessarily represent the views of the Group of Thirty members except those who served on the Steering Committee." The Chairman of the Steering Committee of this Study was Dennis Weatherstone, Chairman of J.P. Morgan.

accompany P.L. 102-546, the Futures Trading Practices Act. The information provided by the Report is consistent with the CFTC's discretionary authority under Section 8(b) of the CEA.[423]

The CFTC Report provides an overview of derivative products found in today's marketplace and their attendant risks, as well as a survey of regulatory controls and risk management practices currently in effect in the United States. In its recommendations, the CFTC Report identifies areas of concern to be addressed in any future attempts to impose additional legal or regulatory safeguards and to ensure the integrity of the OTC derivative markets. Briefly, the CFTC supports cross-jurisdictional regulatory coordination on:

- Information Access;
- Pricing, Disclosure and Risk Valuation Issues;
- Internal Controls; and
- Clearing Facilities for OTC Derivatives.

The CFTC supports the establishment of an interagency council to foster additional regulatory coordination in the area of OTC derivatives. The OCC also suggested recently the creation of a task force to address certain derivative issues.[424] The CFTC also set forth several areas for future consideration, namely:

- Clearing Facilities for Swaps;
- FDICIA Netting Eligibility;
- Risk Management;
- Treasury Amendment; and
- Tax Treatment.

Various proposals for the development of clearing facilities for swaps, foreign currencies and other types of OTC derivatives have been discussed. The CFTC's exemptive provision for swaps requires that proposals for multilateral netting facilities, other than those limited to netting of payment flows, be submitted for review by the CFTC. Although no specific proposals for swaps clearing facilities have yet been submitted to the CFTC, the CFTC currently has under review, and has published for public comment, two exchange petitions which may raise certain related issues. Both petitions contemplate that exchange trading and clearing of transactions, limited to institutions or highly accredited individuals, would occur on a largely unregulated basis.[425]

The CFTC has communicated to the Federal Reserve its support for extending the netting validity provisions of FDICIA to participants in any swaps clearing facility the

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[423] Section 8(b) of the CEA pertains to confidentiality; i.e., information contained within the Report has been reviewed for confidential material and does not compromise privileged information.

[424] Speech of Eugene Ludwig, Comptroller of the Currency, before the Institute of International Bankers, September 27, 1993.

[425] Notice of Petitions for Exemptions and Request for Comment, 58 Fed. Reg. 43,414 (August 16, 1993). The CFTC notes that issues have been raised regarding whether the growth of unregulated OTC derivative transactions has put regulated futures exchanges at a competitive disadvantage. The CFTC intends to examine these issues closely as part of its consideration of these exchange petitions. These issues will also be examined in another Congressionally mandated study on competitiveness issues due in 1994.

Commission may ultimately approve.[426]

The CFTC requested and received authority in the Futures Trading Practices Act of 1992 to obtain information concerning the activities of affiliates of FCMs that are likely to have a material effect on the financial or operational condition of the FCM. The CFTC is proceeding with the development of the rules to implement this authority, in consultation with the SEC and the Federal Reserve.

Recent litigation has raised issues concerning the scope of the Treasury Amendment[427] of the CEA. The CFTC will consider recommending to Congress legislation that would affirm the CFTC's view that the Treasury Amendment does not extend to the sale of futures options on foreign currency to the general public. For some time, the CFTC has worked to eliminate uncertainty concerning the tax treatment of both regulated and unregulated derivatives used in business hedging. This uncertainty which, according to the CFTC, has interfered with the efficient utilization of a wide variety of risk management strategies, has been engendered by the IRS's interpretation of the Supreme Court's decision in Arkansas Best v. Commissioner, 485 U.S. 212 (1988). Under the IRS interpretation, it was unclear to a business hedger whether the tax treatment on the gains and losses arising from the business asset or liability being hedged would be consistent with the tax treatment on the gains or losses arising from the derivatives forming the related hedge position. The CFTC has been concerned that this situation would create inefficiencies and drain liquidity from the futures and options markets.

Since April 1992, the CFTC has urged members of Congress, former Secretary Brady and Secretary of the Treasury Lloyd Bentsen to take actions to clarify the tax treatment of business hedges. On October 18, 1993, the Treasury Department announced temporary and proposed regulations to address this issue.[428] The CFTC intends to review closely the temporary and proposed regulations to determine if written comment on the regulations is warranted to alleviate any remaining uncertainty which might adversely affect the U.S. derivatives industry.

3. THE PROMISEL REPORT

In 1991, the Governors of the central banks of the Group of Ten countries established a working group to study recent developments in international interbank relations. The group was asked to focus on the role and interaction of banks in nontraditional markets, notably the markets for derivative instruments, to examine the linkages among various segments of the interbank markets and among the players active in them, and to consider the concerns to which these aspects might give rise. What follows is a summary of the report's (The Promisel Report) main findings.

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[426] Comment letter, Federal Reserve Board Docket No. R-0801 dated August 20, 1993.

[427] The Treasury Amendment to the CEA (7 USC §2) excludes from CEA coverage "transactions in foreign currency" and other specified financial instruments "unless such transactions involve the sale thereof for future delivery conducted on a board of trade."

[428] Letter from Secretary of the Treasury Lloyd Bentsen to the Honorable Dan Rostenkowski, Chairman, Committee on Ways and Means, October 18, 1993.

The Report concluded that international interbank relations have undergone significant changes in recent years. Most notably, financial operations involving derivative instruments have significantly altered the role of the traditional international interbank deposit markets. Such operations have strengthened linkages among various sectors of the financial industry, as well as between banks and non-financial firms. Market participants cited several important driving forces behind these changes.

- Credit concerns, capital constraints and the advantages of derivative instruments for hedging and position-taking purposes have contributed to a relative, and in some cases, absolute decline in activity in a number of traditional interbank markets. By contrast, since the mid-1980s, the growth of turnover and volumes outstanding in markets for derivative instruments, including OTC markets that offer more customized products, has outpaced the growth of most other financial market activity. Banks have accounted for a large share of that growth, in part in their role as suppliers of derivative products to their clients, but increasingly through transitions on their own behalf for risk management and position-taking purposes.

- The heightened concern about credit risk, reflecting both a perception of increased default risk and greater difficulties in assessing counterparties' strength, has led many banks to reduce the size of interbank credit exposures that can be authorized, to shorten the maturity of the business they are willing to take on, and to limit dealing activities that yield low profits but give rise to large counterparty exposures. As a result, both traditional and new wholesale market businesses increasingly concentrated on a relatively small group of higher rated institutions, primarily banks, on which smaller banks have become more dependent.

- The complexity of risks incurred in OTC derivative markets means that firms wanting to participate profitably and safely in them must have at their disposal advanced hardware and software systems and highly skilled individuals. These requirements have contributed further to the concentration of more complex transactions on the books of a small number of players, not all of which are banks.

- The increased concentration of funds in certain types of institutions that trade actively has increased the ability of some large players individually and collectively to affect market prices. Because of the resulting increase in risks, in many markets, less capital is devoted to the market-making function relative to overall capital put at risk in them. Market-making has become increasingly concentrated in firms that possess the size and expertise required to handle the risks profitably.

- Linkages between markets have been greatly strengthened by the more rapid dissemination of information, the increased use of derivative products and the more widespread use of complex instruments and strategies that span many market segments. At the same time, the presence of the same small set of key players in most of the wholesale markets has deepened linkages among the participating institutions.

The Report also stated that the changing nature of international interbank operations has significantly altered the risk environment facing banks. Additionally, the

assessment of counterparty risks is now considerably more difficult. The complexity of risk encountered in banks' derivative operations also presents major challenges, as does the management of intra-day credit exposures and settlement positions that have arisen as a result of the increase in wholesale market trading. Market risk, by contrast, is said to be more manageable now than in the past, owing to the efforts firms have made in recent years to control these risks through the use of derivative instruments or other techniques. Participants have responded to changes in their risk environment by upgrading risk management capabilities; however, there is no single agreed best practice and, at many firms, significant gaps remain between the desired capabilities of risk management systems and the systems actually in operation, reflecting in most cases the significant cost involved in implementing them.

The Report indicated that to keep pace with the rapidly changing financial environment, market participants, individually and collectively, need to develop further the procedures and infrastructures required to monitor and control risks. The Report offered three primary measures to achieve this:

- Properly designed netting arrangements can reduce risks. In particular, legal uncertainties involving the enforceability of netting arrangements should be addressed.

- Market participants and central banks should encourage efforts aimed at improving and achieving some harmonization of accounting and reporting practices with respect to off-balance sheet instruments.

- Cooperative efforts should be encouraged to resolve uncertainties with respect to the laws affecting financial markets in individual countries and the application of various laws to international financial activities.

Finally, the Promisel Report concluded that the rapidly changing environment also presents new challenges to the traditional roles of central banks in fostering financial market stability. In order to play an effective supporting role in further reducing risks, central banks need to continue to further develop their understanding of the nature of derivative activities and of the risks faced individually and collectively by all participants in these financial markets.

4. INSTITUTE OF INTERNATIONAL FINANCE

In 1992, the Bank for International Settlements (BIS) published the Promisel Report,[429] which encouraged the banking industry to communicate its suggestions for the supervision of their derivative activities. Member banks of the Institute of International Finance (IIF) welcomed the encouragement of the Promisel Report, and took the initiative to describe prudent practices that would help reduce derivative-related risks without adversely impacting on the market's function and flexibility. The banks hoped that by articulating their views through the forum of the IIF, they might contribute to the

[429] Report Prepared by a Working Group established by the Central Banks of the Group of Ten Countries, "Recent Developments in International Interbank Relations," Bank for International Settlements, Basle, October 1992.

international public policy debate while also providing guidance to all banks participating or planning to participate in the derivative markets. The banks also hoped to dispel any misperceptions concerning their derivative activities and the related management controls that currently exist.

Also in 1992, a task force on bank derivative activities, composed of senior bank managers from European, Japanese and U.S. banks was formed at the IIF. In May 1993, the task force released recommendations on four key issues in conjunction with the Promisel initiative and the responses from IIF-member banks. What follows is a summary of the IIF task force recommendations;

- **RECOMMENDATION #1: Internal Controls**

The IIF task force agreed with the Promisel Report that all participants in the derivative markets must have strong internal control systems. A commitment to such systems requires strong and clear policies in two distinct areas.

a. Risk Management: Banks participating in the task force strongly confirmed that internal trading limits exist for certain market risks. Banks also agreed that credit limits should be set for collateralized transactions. Furthermore, all participating banks agreed that senior trading and credit policy executives should meet on a regular basis to review limits set for derivative risks. This may include discussion of contingency plans for market disruptions. Informal discussions should occur daily in deteriorating credit quality or market situations. The banks underscored the importance of regular communication between risk managers, and affirmed that regular and open channels of communication should exist between front and back office managers in order to ensure that accurate records of transactions, trading limits, and credit limits are kept. Such communication would decrease the operational risk that undocumented trades or inaccurate record-keeping could occur, thereby undermining credit and trading limits. Internal controls to cover operational risks should seek to ensure integrity of data entry, accuracy of front office pricing, prompt documentation of transactions, compatibility of front and back office systems and databases, and continuity of staff. Regular and open communication between headquarters and affiliates is also indispensable.

b. Risk Assessment: Banks in the task force believe that an open and flexible approach to technical risk assessment methods will encourage innovation and will enable market discipline to reward the most efficient market participants. The banks emphasize that the methods for dividing and measuring risk are evolving at a very fast pace. Rather than prescribing specific risk measurement methods which may soon become obsolete, banks believe that the proper regulatory focus should instead be on evaluating management's ability to create a risk-sensitive environment and to identify and adapt to technological and analytical developments.

- **RECOMMENDATION #2: Netting**

Banks participating in the IIF task force strongly endorsed the use of netting arrangements as a method of reducing derivative-related risks. Derivative market participants currently use various types of netting arrangements such as obligation netting

(netting-by-novation), payment netting and close-out netting. The legal enforceability of the latter two types of netting arrangements has been questioned, thereby impairing the ability of banks to rely on netting arrangements to reduce their credit exposures for capital adequacy purposes. The banks strongly endorsed the Promisel Report's call for increased legal certainty needed to enforce netting arrangements. Properly designed netting systems can alleviate concerns about expanding counterparty risks by (a) screening participants, (b) setting realistic exposure limits, and possibly, (c) requiring collateral to support transactions. This is true for both bilateral and multilateral systems.

- **RECOMMENDATION #3: Capital Adequacy**

Banks participating in the IIF task force continue to believe that the Basle Capital Accord provides an adequate and uniform measure of capital adequacy for credit risk. However, they also believe that the Accord should be refined to reflect changes in banking services since the Accord was agreed to in 1988. The task force believes that the current capital framework overestimates some credit risks presented by banks' off-balance sheet activities in three ways: **First**, the Accord recognizes only obligation netting (netting-by-novation) as a method for reducing counterparty credit exposures. By requiring banks to hold capital against their gross exposures, the Accord significantly overestimates the true credit risk and capital necessary to cover that risk. **Second**, the banks believe that the capital framework is insufficiently sensitive to durational elements in off-balance sheet financial instruments. Banks suggest that the maturity structure should be refined to include more precise time bands than currently exist. **Third**, the Accord uses notional principal amounts of the underlying instrument as one of two bases against which banks may hold risk-based capital. This creates a misleading and excessive measure of credit risk for derivative transactions.

The task force also believes that the Accord underestimates the capital that banks currently hold to cover these activities, because the framework does not recognize capital allocations made to cover market risk. With increased use of innovative financial instruments, banks have adapted their credit policy processes to include analysis of market risks inherent in these instruments. This has led some banks in the task force to set aside "economic" capital to cover the risks and costs of derivative transactions in a number of innovative ways. Such market risk capital allocations have been developed in response to a need to manage derivative risks prudently, rather than as a response to specific regulatory rules.

- **RECOMMENDATION #4: Disclosure**

The necessary corollary to reliance on strong management systems is the ability to assess relevant information for internal analysis. Banks on the IIF task force believe that their credit analysis would benefit from increased and more uniform counterparty disclosures concerning derivative activities. Banks also believe that increased disclosures would serve systemic stability, as market participants would be obliged to undergo more stringent market scrutiny. Banks recognize that the momentum for uniform disclosure of derivative activities is growing, and that many jurisdictions already require a great deal of disclosure from banks concerning their off-balance sheet activities.

5. GENERAL ACCOUNTING OFFICE

In 1992, requests were made to the General Accounting Office to examine issues surrounding derivative activities. Several members of Congress were involved, in some context or another, with these inquiries. They included Senator Riegle, and Representatives Gonzalez, Markey and Leach.

The GAO is currently in the process of preparing their report, which is expected to be released in 1994.

6. BANK OF ENGLAND

In April 1993, the Bank of England published Derivatives: Report of an Internal Working Group. The Report provides the findings and recommendations of an internal working group on derivatives set up by the Bank of England. The group was given the specific task of focusing on derivative activities in London, the associated risks at UK banks, and the supervisory and central bank issues related to this topic.

The working group selected 19 institutions as a basis for their inquiry, comprising of 10 banks, 5 securities firms, 2 institutional investors, and two corporate treasurers. Of the banks, 6 were UK institutions as opposed to foreign subsidiaries or branches. All of the banks and securities firms were active in derivatives, although a number of the banks were not yet major players in the field of derivatives.

The two substantive recommendations provided by the Bank of England report are 1) "that research on the relative price volatility and liquidity of cash and derivative markets should be conducted, with a view to improving our understanding of the increasing links between financial markets, and their potential systemic implications," and 2) "that the Bank [of England], in consultation with the BIS, considers which data on exchange-traded and OTC derivative markets it is desirable to collect for the purposes of examining market size and the degree of concentration, and subsequently considers establishing a survey of the derivative markets comparable to that already conducted for foreign exchange activity."

7. INTERNATIONAL MONETARY FUND

In August 1993, a staff team from the International Monetary Fund (IMF) published a study entitled The Growing Involvement of Banks in Derivative Finance -- A Challenge for Financial Policy. The study provided an overview of the derivative markets, the risks associated with these markets, and the instruments traded therein.

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APPENDIX A

ISDA Membership List

APPENDIX A

ISDA
International Swaps & Derivatives Association, Inc.
Membership List

1 ABN-AMRO Bank N.V.

2 AIG Financial Products Corp.

3 AKROS spa

4 Allied Irish Banks plc

5 Australia & New Zealand Banking Group Ltd.

7 BFG Bank, AG

8 BHF Bank

9 Prebon Yamane USA Inc.

10 Banca CRT - Cassa di Risparmio de Torino

11 Banca Commerciale Italiana

12 Banca Nazionale del Lavoro

13 Banca del Gottardo

14 Banco Bilbao Vizcaya, S.A.

15 Banco Santander

16 Banco di Napoli

17 MeesPierson N.V.

18 Bank of America

19 Bank of Boston

20 Bank of Ireland Group Treasury Ltd.

21 Bank of Montreal

22 Bank of New York

23 Bank of Nova Scotia

24 Bank of Tokyo Capital Markets Limited

25 Bank of Tokyo, Ltd.

26 Bankers Trust International, Limited

27 Banque Indosuez

28 BNP Capital Markets Ltd.

29 Barclays de Zoete Wedd Ltd.

30 Baring Brothers & Co., Ltd.

31 Bayerische Hypotheken und Wechsel Bank

32 Bayerische Landesbank Girozentrale

33 Bayerische Vereinsbank AG

34 Bear, Stearns & Co. Inc.

35 Berliner Bank Aktiengesellschaft

36 CARIPLO - Cassa di Risparmio delle Provincio

37 Caisse Nationale de Credit Agricole

38 Canadian Imperial Bank of Commerce

40 Chase Manhattan Bank

41 Chemical Bank

42 Christiania Bank

43 Citibank, N.A.

44 Cofiri Servizi Finanziari SpA

45 Commerzbank AG

46 Commonwealth Bank of Australia

47 Compagnie Financiere de L'Union Europeene

48 Confederation Treasury Services Limited

49 Continental Bank, N.A.

50 Credit Commercial de France

51 Credit Lyonnais

52 Credit Suisse Financial Products

53 DG Bank Deutsche Genossenschaftsbank

54 DKB Financial Products, Inc.

55 Dai-Ichi Kangyo Bank, Ltd.

56 Daiwa Bank, Limited

57 Daiwa Europe Bank plc

58 Den Danske Bank

59 Deutsche Bank

60 Dresdner Bank AG

61 Elf Trading S.A.

62 Euro Brokers Capital Markets Inc.

63 FINACOR

64 Standard Chartered Bank

65 First National Bank of Chicago

66 Fuji Bank Ltd.

67 Fuji Capital Markets Corp.

68 Garvin GuyButler Corp.

69 General Re Financial Products Corp.

70 GiroCredit Bank AG der Sparkassen

72 Goldman Sachs & Co.

74 Landesbank Hessen-Thueringen Girozentrale

75 Hill Samuel Bank Ltd.

76 Midland Global Markets

77 IBJ International

78 Industrial Bank of Japan, Limited

79 Industriekreditbank AG-Deutsche Industriebank

80 Intercapital Brokers Ltd.

81 Istituto Bancario San Paolo di Torino S.p.A.

82 Istituto Mobiliare Italiano

83 J. Henry Schroder Wagg & Co. Limited

84 Kidder, Peabody & Co. Incorporated

85 Kleinwort Benson Ltd.

86 Asahi Bank, Ltd.

87 Lehman Brothers

88 Lloyds Bank Plc

89 Long-Term Credit Bank of Japan, Ltd.

90 Martin Bierbaum (Italia) Spa - S.i.m.

91 Maryland National Bank

92 Mellon Bank, N.A.

94 Merrill Lynch & Co. Inc., Ltd.

96 Mitsubishi Capital Market Services, Inc.

97 Mitsubishi Trust and Banking Corp.

98 Mitsui Trust & Banking Co. Ltd.

99 Morgan Grenfell & Co., Ltd.

100 J.P. Morgan Securities Ltd.

101 Morgan Stanley & Co. Inc.

102 N.M. Rothschild & Sons Limited

103 Natwest Capital Markets Ltd.

104 National Bank of Canada

105 NationsBank

106 ING Bank

107 Nikko Securities Co., Ltd.

108 Nippon Credit Bank, Ltd.

109 Nomura Capital Services Inc.

110 Norddeutsche-Landesbank Girozentrale

111 Norinchukin Bank

112 Norinchukin International plc

113 International Capital Markets, S.I.M., Spa

115 Paribas Capital Markets Group

117 Prudential Global Funding Inc.

118 Rabobank Nederland

119 Republic National Bank of New York

120 Royal Bank of Canada

121 Royal Bank of Scotland

122 S.G. Warburg & Co. Ltd.

123 Sakura Bank Limited

124 Sakura Global Capital

125 Salomon Brothers Inc.

126 Sanwa Bank, Ltd.

127 Sanwa Financial Products Co. L.P.

128 Saudi International Bank

129 Shoko Chukin Bank

130 Enskilda Corporate

131 Societe Generale

132 Sumitomo Bank Capital Markets, Inc.

133 Sumitomo Bank, Limited

134 Sumitomo Trust and Banking Co., Ltd.

135 Svenska Handelsbanken

136 SwedBank

137 Swiss Bank Corporation (Canada)

138 Swiss Volksbank

139 Tokai Bank, Ltd.

140 Toronto Dominion Bank

141 Tradition (NA) Inc.

142 Trinkaus & Burkhardt KGaA

143 UBS Securities Inc.

144 Unibank A/S

145 Westdeutsche Lanesbank Girozentrale

146 Westpac Banking Corporation

147 Wood Gundy, Inc.

148 Yamaichi Securities Co., Ltd.

149 Yasuda Trust & Banking Co., Ltd.

150 Enron Risk Management Services Corp.

151 Banca di Roma S.p.A.

152 Bank of Scotland Treasury Services PLC

153 New Japan Securities Co., Ltd.

154 First Union Bank of North Carolina

155 Banco Espanol de Credito S.A. (BANESTO)

156 CEDEF Capital Services SA

157 M.W. Marshall & Company Limited

158 Caisse des Depots et Consignations

159 Creditanstalt-Bankverein

801 Egnatia Bank

APPENDIX B

Charts on Volume and Type of Derivative Activities of Financial Institutions

Volume of Derivatives Activities at U.S. Bank Holding Companies and Number of BHCs Reporting Derivatives Activities

Item Name	BHCs > $10 Billion in Assets		BHCs < $10 Billion in Assets		All BHCs	
	Notional Value ($ Millions)	Number of BHCs	Notional Value ($ Millions)	Number of BHCs	Notional Value ($ Millions)	Number of BHCs
Interest Rate Contracts						
Swaps	2,348,068	55	18,326	96	2,366,394	151
Futures/Forwards	2,069,680	47	10,720	47	2,080,400	94
Options (Written)	793,708	45	4,060	21	797,767	66
Options (Purchased)	779,573	47	5,907	31	785,480	78
Total	5,991,028		39,013		6,030,041	
Foreign Exchange Contracts						
Swaps	287,623	26	104	2	287,727	28
Futures/Forwards	3,642,592	55	3,104	65	3,645,696	120
Options (Written)	261,096	28	13	4	261,109	32
Options (Purchased)	254,889	28	12	3	254,902	31
Total	4,446,201		3,233		4,449,434	
Commodity & Equity Contracts						
Swaps	26,375	12	1	1	26,376	13
Futures/Forwards	95,144	13	357	5	95,501	18
Options (Written)	80,210	10	14	5	80,223	15
Options (Purchased)	40,368	12	22	3	40,390	15
Total	242,097		393		242,490	

Source: Consolidated Financial Statements for Bank Holding Companies (FR Y-9C), June 30, 1993 data

Volume of Derivatives Activities at U.S. Bank Holding Companies and Number of BHCs Reporting Derivatives Activities

Item Name	BHCs > $10 Billion in Assets		BHCs < $10 Billion in Assets		All BHCs	
	Notional Value ($ Millions)	Number of BHCs	Notional Value ($ Millions)	Number of BHCs	Notional Value ($ Millions)	Number of BHCs
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Total	242,097		393		242,490	

Source: Consolidated Financial Statements for Bank Holding Companies (FR Y-9C), June 30, 1993 data.

Volume of Derivatives Activities at State Member Banks and Number of State Member Banks Reporting Derivatives Activities

Item Name	SMBs > $10 Billion in Assets		SMBs < $10 Billion in Assets		All SMBs	
	Notional Value ($ Millions)	Number of SMBs	Notional Value ($ Millions)	Number of SMBs	Notional Value ($ Millions)	Number of SMBs
Interest Rate Contracts						
Swaps	1,380,492	12	19,275	51	1,399,767	63
Futures/Forwards	1,278,702	10	11,412	16	1,290,114	26
Options (Written)	549,819	11	5,539	12	555,358	23
Options (Purchased)	441,518	11	9,182	13	450,699	24
Total	3,650,530		45,408		3,695,938	
Foreign Exchange Contracts						
Swaps	170,038	5	1	1	170,040	6
Futures/Forwards	1,458,172	12	1,560	22	1,459,732	34
Options (Written)	132,202	6	240	4	132,442	10
Options (Purchased)	127,412	6	255	4	127,666	10
Total	1,887,824		2,056		1,889,879	
Commodity & Equity Contracts						
Swaps	18,973	3	0	0	18,973	3
Futures/Forwards	19,627	4	51	1	19,678	5
Options (Written)	27,380	3	0	0	27,380	3
Options (Purchased)	29,672	3	0	0	29,672	3
Other \1	N/A	N/A	22	1	22	1
Total	95,653		73		95,725	

\1 Banks with assets less than $300 million do not report commodity and equity contracts by type of contract.
Source: Consolidated Financial Reports of Condition and Income, June 30, 1993 data.

10 HOLDING COMPANIES WITH THE MOST DERIVATIVE CONTRACTS

June 30, 1993, Notional Amounts, $ Millions

Rank	Holding Company Name	State	Assets	Total Derivatives	Total Futures & Forwards	Total Swaps	Total Options
1	CHEMICAL BANKING CORPORATION	NY	$145,522	$2,117,385	$1,245,500	$554,257	$317,628
2	BANKERS TRUST NEW YORK CORPORA	NY	83,987	1,769,947	816,740	355,597	597,610
3	CITICORP	NY	216,285	1,762,478	1,207,132	264,811	290,535
4	J.P. MORGAN & CO. INCORPORATED	NY	132,532	1,550,680	572,897	579,219	398,563
5	CHASE MANHATTAN CORPORATION	NY	99,085	1,125,075	666,150	258,086	200,839
6	BANKAMERICA CORPORATION	CA	185,466	899,783	581,034	229,926	88,823
7	FIRST CHICAGO CORPORATION	IL	49,936	452,780	276,790	100,666	75,324
8	CONTINENTAL BANK CORPORATION	IL	22,352	170,052	61,058	52,953	56,041
9	REPUBLIC NEW YORK CORPORATION	NY	36,205	164,979	81,707	45,504	37,768
10	BANK OF NEW YORK COMPANY, INC. T	NY	41,045	91,434	65,128	12,200	14,106
	Top 10 Holding Companies			10,104,592	5,574,136	2,453,219	2,077,236
	Other 205 Holding Companies			617,374	247,461	227,278	142,574
	Total Notional Amount for All Holding Companies			10,721,965	5,821,597	2,680,497	2,219,811

Note: Table includes data for companies with total assets of $150 million or more, or with more than one subsidiary bank.
Source: Consolidated Financial Statements for Bank Holding Companies (FR Y-9C)

NOTIONAL AMOUNT OF SWAP CONTRACTS OF 25
NATIONAL BANKS WITH MOST SWAP CONTRACTS
JUNE 30, 1993, $ MILLIONS

OBS	BANKNAME	STATE	ASSETS	TOTAL SWAPS	INTEREST RATE SWAPS	FOREIGN EXCHANGE SWAPS	OTHER SWAPS
1	CITIBANK NA	NY	$168,567	$287,206	$247,940	$35,965	$3,301
2	CHASE MANHATTAN BK NA	ID	79,947	258,086	240,946	15,274	1,865
3	BANK OF AMERICA NT&SA	CA	133,970	234,213	211,701	22,512	0
4	FIRST NB OF CHICAGO	IL	34,081	106,187	95,973	10,172	43
5	CONTINENTAL BK NA	IL	22,038	52,953	52,634	286	33
6	REPUBLIC NB OF NY	NY	28,381	49,214	17,046	31,827	342
7	NATIONSBANK OF NC NA	NC	24,549	23,650	23,650	0	0
8	BANK ONE COLUMBUS NA	OH	6,158	17,546	17,546	0	0
9	MELLON BK NA	PA	28,553	12,668	12,589	78	0
10	NATIONAL WESTMINSTER BK USA	NY	16,457	11,100	11,098	0	2
11	FIRST NB OF BOSTON	MA	25,723	9,937	9,880	57	0
12	MARINE MIDLAND BK NA	NY	16,123	8,798	8,718	80	0
13	BANK ONE TEXAS NA	TX	17,413	8,748	8,748	0	0
14	NATIONAL CITY BK	OH	8,834	8,412	8,412	0	0
15	SEATTLE-FIRST NB	WA	15,099	8,152	8,152	0	0
16	CORESTATES BK NA	PA	15,492	7,292	7,292	0	0
17	FIRST UNION NB NC	NC	20,745	6,983	6,861	122	0
18	PNC BANK NA	PA	36,823	6,977	6,977	0	0
19	FCC NB	DE	4,040	6,707	6,707	0	0
20	SOCIETY NB	OH	18,528	6,417	6,417	0	0
21	TEXAS CMRC BK NA	TX	12,430	6,007	6,002	0	5
22	HUNTINGTON NB	OH	11,710	5,915	5,915	0	0
23	FLEET NB	RI	7,628	4,970	4,970	0	0
24	BANK ONE MILWAUKEE NA	WI	3,280	4,373	4,373	0	0
25	CITIBANK NEVADA NA	NV	4,524	3,929	3,929	0	0
	TOP 25 NATIONAL BANKS			1,156,440	1,034,476	116,374	5,591
	OTHER 242 NATIONAL BANKS			97,034	96,793	228	13
	TOTAL NOTIONAL AMOUNT FOR ALL NATIONAL BANKS			1,253,474	1,131,269	116,602	5,604

Source: Call Report Schedule RC-L

NOTIONAL AMOUNT OF FUTURES & FORWARD CONTRACTS OF 25
NATIONAL BANKS WITH MOST FUTURES & FORWARD CONTRACTS
JUNE 30, 1993, $ MILLIONS

OBS	BANKNAME	STATE	ASSETS	TOTAL FUTURES & FORWARDS	FOREIGN EXCHANGE FUTURES & FORWARDS	INTEREST RATE FUTURES & FORWARDS	OTHER FUTURES & FORWARDS
1	CITIBANK NA	NY	$168,567	$1,232,449	$925,077	$303,666	$3,706
2	CHASE MANHATTAN BK NA	ID	79,947	608,189	467,837	134,117	6,235
3	BANK OF AMERICA NT&SA	CA	133,970	570,700	425,034	145,666	0
4	FIRST NB OF CHICAGO	IL	34,081	276,096	190,878	85,099	119
5	REPUBLIC NB OF NY	NY	28,381	80,760	61,291	14,704	4,765
6	CONTINENTAL BK NA	IL	22,038	61,058	21,752	39,119	187
7	FIRST NB OF BOSTON	MA	25,723	49,119	24,198	24,921	0
8	MELLON BK NA	PA	28,553	15,785	11,201	4,584	0
9	FIRST UNION NB NC	NC	20,745	13,347	3,667	9,680	0
10	SEATTLE-FIRST NB	WA	15,099	11,883	332	11,551	0
11	NATIONSBANK OF NC NA	NC	24,549	9,692	5,846	3,846	0
12	NATIONAL WESTMINSTER BK USA	NY	16,457	7,467	3,085	4,381	0
13	MARINE MIDLAND BK NA	NY	16,123	6,975	0	6,975	0
14	WELLS FARGO BK NA	CA	49,909	5,354	340	5,014	0
15	SHAWMUT BK CONNECTICUT NA	CT	12,761	4,637	4,622	15	0
16	SHAWMUT BK NA	MA	13,410	3,771	3,655	116	0
17	FIRST BK NA	MN	13,380	3,422	1,819	1,604	0
18	NATIONSBANK OF TX NA	TX	36,911	3,354	1,878	1,476	0
19	WACHOVIA BK OF NC NA	NC	18,625	3,222	1,095	2,127	0
20	FLEET BK OF MA NA	MA	7,699	2,984	2,383	601	0
21	CITIBANK NEVADA NA	NV	4,524	2,945	0	2,945	0
22	FIRST SECURITY BK IDAHO NA	ID	3,228	2,712	0	2,712	0
23	FIRST UNION NB FL	FL	26,197	2,625	0	2,625	0
24	CITIBANK SOUTH DAKOTA NA	SD	5,776	2,516	0	2,516	0
25	NBD BK NA	MI	24,400	2,466	2,309	157	0
	TOP 25 NATIONAL BANKS			2,983,529	2,158,300	810,216	15,013
	OTHER 125 NATIONAL BANKS			31,542	10,644	20,739	159
	TOTAL NOTIONAL AMOUNT FOR ALL NATIONAL BANKS			3,015,071	2,168,944	830,955	15,172

ource: Call Report Schedule RC-L

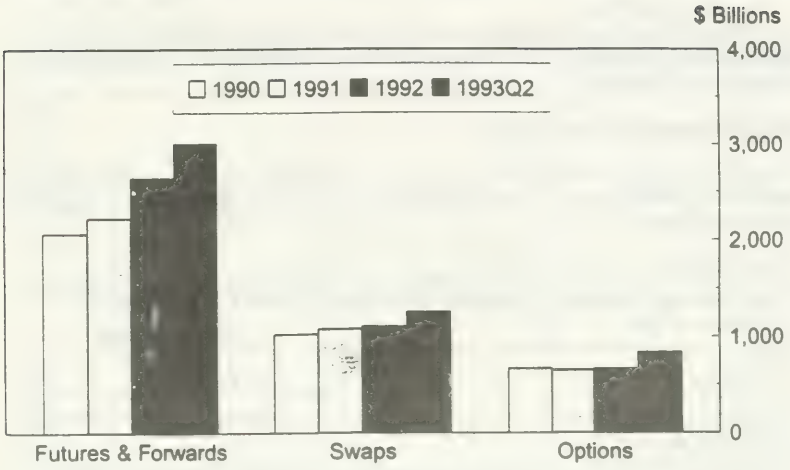
NOTIONAL AMOUNT OF OPTION CONTRACTS OF 25
NATIONAL BANKS WITH MOST OPTION CONTRACTS
JUNE 30, 1993, $ MILLIONS

OBS	BANKNAME	STATE	ASSETS	TOTAL OPTIONS	INTEREST RATE OPTIONS	FOREIGN EXCHANGE OPTIONS	OTHER OPTIONS
1	CITIBANK NA	NY	$168,567	$269,621	$167,607	$90,743	$11,271
2	CHASE MANHATTAN BK NA	ID	79,947	159,867	81,755	72,324	5,788
3	BANK OF AMERICA NT&SA	CA	133,970	88,633	68,042	20,591	0
4	FIRST NB OF CHICAGO	IL	34,081	75,161	45,412	29,645	103
5	CONTINENTAL BK NA	IL	22,038	55,841	40,387	13,920	1,534
6	REPUBLIC NB OF NY	NY	28,381	37,679	13,970	22,138	1,571
7	FIRST UNION NB NC	NC	20,745	25,626	25,294	332	0
8	CITIBANK NEVADA NA	NV	4,524	20,649	20,649	0	0
9	NATIONAL WESTMINSTER BK USA	NY	16,457	12,013	11,992	19	2
10	PNC BANK NA	PA	36,823	11,778	11,768	10	0
11	FIRST NB OF BOSTON	MA	25,723	11,617	9,193	2,425	0
12	FIRST UNION NB FL	FL	26,197	7,300	7,300	0	0
13	WELLS FARGO BK NA	CA	49,909	7,045	7,017	28	0
14	CITIBANK SOUTH DAKOTA NA	SD	5,776	6,201	6,201	0	0
15	HUNTINGTON NB	OH	11,710	4,190	4,190	0	0
16	SHAWMUT BK NA	MA	13,410	3,818	3,816	0	2
17	MARYLAND NB	MD	11,758	3,509	3,500	9	0
18	MELLON BK NA	PA	28,553	2,736	1,786	951	0
19	NATIONSBANK OF GA NA	GA	14,936	2,142	1,990	152	0
20	UNITED STATES NB	OR	10,809	2,014	2,014	0	0
21	TEXAS CMRC BK NA	TX	12,430	1,948	1,941	6	0
22	SHAWMUT BK CONNECTICUT NA	CT	12,761	1,889	1,888	0	2
23	FIRST SECURITY BK OF UTAH NA	UT	4,480	1,684	1,684	0	0
24	NATIONSBANK OF NC NA	NC	24,549	1,567	914	653	0
25	NATIONAL CITY BK	OH	8,834	1,477	1,471	6	0
	TOP 25 NATIONAL BANKS			816,003	541,779	253,951	20,273
	OTHER 78 NATIONAL BANKS			17,583	16,640	910	33
	TOTAL NOTIONAL AMOUNT FOR ALL NATIONAL BANKS			833,586	558,419	254,861	20,306

Source: Call Report Schedule RC-L

Derivatives by type

National banks



Derivatives by type*

	1990	1991	1992	1993Q2
Futures & Forwards	2075.1	2235.1	2653.8	3015.1
Swaps	1024.0	1081.1	1105.8	1253.5
Options	666.0	651.9	554.8	533.6

* in billions of dollars

Source: Call Reports

Regulatory & Statistical Analysis

Use of Derivatives by Savings Associations Industry Trends and Developments

Less than half of all savings associations use derivative financial products. About 42 percent of the savings institutions use mortgage derivatives, while less than 8 percent use off-balance sheet derivatives.

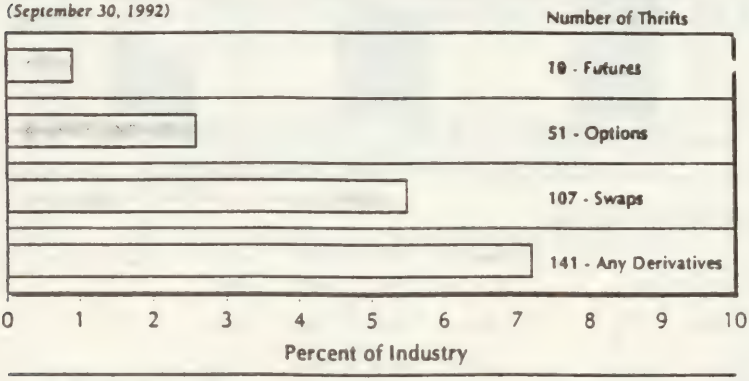
Off-Balance-Sheet Derivatives

Interest rate swaps are the most common type of off-balance sheet item used by savings associations (107 institutions). Few institutions hold options (51 institutions) or futures (18 institutions) (figure 1).

FIGURE 1

Few Savings Associations Hold Off-Balance-Sheet Derivatives

(September 30, 1992)



Source: OTS Thrift Financial Reports

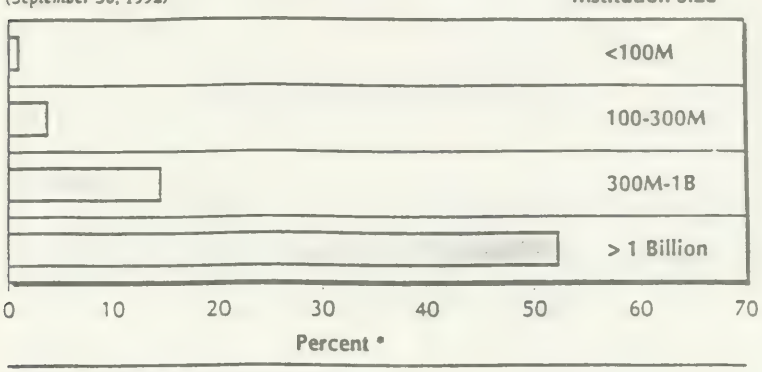
The notional amount of off-balance-sheet positions of savings associations was $44 billion as of September 30, 1992. The largest institutions are the primary users of off-balance-sheet derivatives. Less than one percent of institutions with under $100 million in assets use off-balance sheet derivatives, but more than one-half of those with assets exceeding $1 billion use them (figure 2).

About five percent of the industry, 107 savings associations, had swap transactions outstanding as of September 30, 1992, with a total notional amount of $30 billion. Although the notional amount of swaps outstanding is large, the notional amount is not a meaningful measure of risk exposure, because it says little about their economic value.

FIGURE 2

Large Savings Associations Use Off-Balance-Sheet Derivatives More than Small Associations

(September 30, 1992)



* Percent of size group using OBS Derivatives

Source: OTS Thrift Financial Reports

The notional amount of options positions held by the industry totaled $7.7 billion at the end of the third quarter of 1992. Long options positions involve no risk of loss beyond the purchase price, although any over-the-counter options are subject to counterparty risk. Short options positions have no counterparty risk, but potentially large volatility. Savings associations hold nearly three times as many long options positions as short options positions.

Futures positions of the industry totaled about $6 billion in notional amount. Because futures contracts are marked-to-market daily, and payments are guaranteed by the clearinghouse, there is virtually no counterparty risk.

Industry holdings of off-balance-sheet derivatives have shown no clear trend over the past 4 years. Total notional amount of off-balance-sheet derivatives fell from $50 billion in December 1989 to less than $40 billion in December 1991, before rising back to about $44 billion in September 1992 (figure 3).

APPENDIX C

Basle Committee -- Multilateral Netting: Possible Approach for Supervisory Treatment at Some Future Date

APPENDIX C

Multilateral Netting: Possible Approach for Supervisory Treatment at Some Future Date

A. GENERAL CONSIDERATIONS

Multilateral netting is designed to extend the benefits of netting to cover contracts which originate with any of a group of counterparties that participate in the netting arrangement, instead of with just a single counterparty as in bilateral netting. This can be achieved in practice by netting all transactions that originate bilaterally through a central counterparty -- a clearinghouse.

The legal techniques for achieving this netting may vary, but the result will be that for every eligible transaction agreed by a pair of members, the clearinghouse would be interposed as the common legal counterparty to each member, and the members would have no obligations towards each other under the deal. For each member, the clearinghouse would maintain a running, legally binding net position in each currency and each value date eligible for netting, all subject to a binding netting agreement between the member and the clearinghouse. Thus, for each member of the clearinghouse, multiple transactions that originate with many counterparties can be amalgamated and netted. As a result, in a well-designed multilateral netting scheme, exposures would generally be a fraction of those that would arise in a non-netting environment.

If a clearinghouse member defaults, a foreign exchange clearinghouse would have to replace the cash flows that the defaulting member's portfolio of foreign exchange contracts would have produced. It would establish immediately how much it should pay to, or claim from, the defaulting member, which would be the replacement value of the member's portfolio. In the event of a claim on the defaulter, clearinghouse members would have to cover the shortfall, since the clearinghouse may have very limited resources of its own.

Losses could be recovered from the membership in different ways. In a "defaulter-pays" (or centralized) clearinghouse, each member would be obliged to post collateral equal to its own net debit with the clearinghouse. In the event of a member's default, the clearinghouse would seize the defaulting member's collateral to cover the amount in default. In a "survivors-pay" (or decentralized) clearinghouse, a loss allocation rule would apply to the non-defaulting, surviving members. For example, losses could be allocated in proportion to a measure of the surviving members' bilateral relationship to the defaulting member, such as notional bilateral exposures to the defaulting member.[1]

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[1] Notional bilateral exposures arise from the bilateral transactions that originating members submit to the clearinghouse for netting, and represent the bilateral positions that would have resulted in the absence of multilateral netting. They are notional (and have no legal standing) since once the transaction is accepted for netting by the clearinghouse, it becomes the legal counterparty to each member.

However, as a practical matter, it could be misleading to make a strong distinction between the "survivors-pay" and the "defaulter-pays" models. In practice, multilateral netting schemes could be a hybrid of these models. That is, members would be obliged to reimburse the clearinghouse for losses according to a predetermined loss allocation rule, but losses to be allocated to survivors would be reduced in the first instance by collateral posted by the defaulting member. In addition, even nominal defaulter-pays schemes must include an allocation rule for losses in the event that a defaulter's posted collateral is inadequate to cover its net debit, for whatever reason.

The Lamfalussy Report sets out six minimum standards for netting schemes (**See Appendix 10**). Multilateral netting arrangements will be expected to have, among other things, safeguards to address settlement risk in a responsible manner, including risk controls such as internal limits, adequate and reliable liquidity support, and appropriate technical back-up facilities. The adherence of multilateral schemes to these standards will be monitored by central banks and other relevant authorities. However, each national supervisor whose banks belong to a multilateral netting arrangement should be satisfied that the standards are met before extending supervisory recognition to the netting performed under the scheme.

B. CAPITAL REQUIREMENTS UNDER MULTILATERAL NETTING

1. Capital Requirements for Current Exposure

Under any multilateral netting arrangement, there must be an agreed formula whereby any losses suffered by the clearinghouse from the default of any of the members would be allocated to other members, even if the possibility of loss for the clearinghouse is remote as a result of comprehensive collateral arrangements. This formula will provide the current exposure for each member. It appears that the multilateral foreign exchange netting arrangements now being developed will rely on procedures that would allocate the sharing of a loss pro rata according to the pattern of notional bilateral claims on the defaulting member. That is, if a member's default (or close-out) caused a replacement loss to the clearinghouse, a bank would be allocated a loss share in proportion to its notional bilateral exposure to the defaulting (or closed-out) member. If the clearinghouse requires collateral, the loss to be allocated would be the residual loss (the amount by which the replacement loss exceeded the value of the collateral).

A starting point would be to regard a bank's current exposure as the sum of the loss shares that it would be allocated in the event of the default (or close-out) of each clearinghouse member to which it had a notional bilateral exposure, after factoring in the use of collateral available to the clearinghouse.[2] The sum of the loss

[2] In the case of a clearinghouse that on a daily basis marks all outstanding contracts to market and collects from its members daily losses and pays out to its members daily gains (i.e., collects and pays variation margin), the capital treatment would be consistent with that of exchange-traded instruments – specifically, no capital would be required.

shares provides an analogous treatment with non-netted contracts. In the case of non-netted contracts, the exposure is the sum of the exposure to the potential default of each counterparty. Of course, the effect of multilateral netting will tend to lower this exposure.

At this time, the Basle Committee has not reached conclusions about the level of capital requirements that should be attached to this measure of current exposure. This question will be kept under review in the light of the continuing development of the multilateral foreign exchange netting initiatives and their oversight by central banks and other relevant authorities. In due course, further consultation will be needed.

2. Capital Requirements for Potential Future Exposure

The capital requirements under consideration by the Committee would also require a charge for potential future exposure. However, potential future exposure for a member of a multilateral netting facility would be determined by a combination of the evolution of underlying rates and prices, the changing pattern of clearinghouse exposure to other members, and the loss allocation procedure in place. A highly simplified approximation will be required to determine the add-ons needed to cover the resulting exposure.

C. RISK WEIGHTS FOR THE CLEARINGHOUSE

Banks will have exposure to the clearinghouse for example through funding and liquidity back-up, to which a risk weight would need to be applied. Consistent with the Accord, the weight applicable to claims on a clearinghouse would be the normal 100% private-sector weighting, unless the clearinghouse is incorporated as a bank and becomes subject to bank supervisors' rules, in which case a 20% weight would be appropriate, or the host government or central bank has given a clear and unequivocal guarantee for all of its obligations, in which case a zero weight would be justified.

APPENDIX D

Basle Committee -- Minimum Standards for Netting Schemes Set Out by the Lamfalussy Report

APPENDIX D

Minimum Standards for Netting Schemes Set Out by the Lamfalussy Report

1) Netting schemes should have a well-founded legal basis under all relevant jurisdictions.

2) Netting scheme participants should have a clear understanding of the impact of the particular scheme on each of the financial risks affected by the netting process.

3) Multilateral netting systems should have clearly-defined procedures for the management of credit risks and liquidity risks which specify the respective responsibilities of the netting provider and the participants. These procedures should also ensure that all parties have both the incentives and the capabilities to manage and contain each of the risks they bear and that limits are placed on the maximum level of credit exposure that can be produced by each participant.

4) Multilateral netting systems should, at a minimum, be capable of ensuring the timely completion of daily settlements in the event of an inability to settle by the participant with the largest single net-debit position.

5) Multilateral netting schemes should have objective and publicly-disclosed criteria for admission which permit fair and open access.

6) All netting schemes should ensure the operational reliability of technical systems and the availability of back-up facilities capable of completing daily processing requirements.

APPENDIX E

Basle Committee -- Proposed Amendment to the 1988 Capital Accord for Bilateral Netting

APPENDIX E

Proposed Amendment to the 1988 Capital Accord for Bilateral Netting

The language below would replace page 30 of the 1988 Capital Accord in respect of the recognition of bilateral netting for the purpose of calculating capital requirements.

Careful consideration has been given to the issue of bilateral netting, i.e., weighting the net rather than the gross claims arising out of swaps and similar contracts with the same counterparties.[1] The [Basle] Committee is concerned that if a liquidator of a failed counterparty has (or may have) the right to unbundle netted contracts, demanding performance on those contracts, there is no reduction in counterparty credit risk. Accordingly, it has been agreed that:

- Banks may net transactions subject to novation under which any obligation between a bank and its counterparty to deliver a given currency on a given value date is automatically amalgamated with all other obligations for the same currency and value date, legally substituting one single amount for the previous gross obligations.

- Banks may also net transactions subject to any legally valid form of bilateral netting not covered in (A), including other forms of novation.

- In both cases (A) and (B), a bank will need to satisfy its national supervisor that it has:[2]

(1) A netting contract or agreement with the counterparty which creates a single legal obligation, covering all included transactions, such that, in the event of a counterparty's failure to perform due to default, bankruptcy or liquidation, the bank would have a claim or obligation respectively, to receive or pay only the net value of the sum of unrealized gains and losses on included transactions;

(2) Written and reasoned legal opinions that, in the event of a legal challenge, the relevant courts and administrative authorities would find the bank's exposure to be such a net amount under:

(i) the law of the jurisdiction in which the counterparty is chartered and, if the counterparty is a branch of a foreign bank, then also under the law of the jurisdiction in which the branch is located;

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[1] Payments netting, which is designed to reduce the operational costs of daily settlements, will not be recognized in the capital framework since the counterparty's gross obligations are not in any way affected.

[2] In cases where an agreement as described in (A) has already been recognized prior to the effect of this amendment to the Accord, the supervisor will determine whether any additional steps consistent with the requirements below are necessary to satisfy itself of the legal validity of the agreement.

(ii) the law that governs the individual transactions; and

(iii) the law that governs any contract or agreement necessary to affect the netting.

The national supervisor, after consultation when necessary with other relevant supervisors, must be satisfied that the netting is enforceable under the laws of each of the relevant jurisdictions;[3] and

(3) Procedures in place to ensure that the legal characteristics of netting arrangements are kept under review in the light of possible changes in relevant laws.

For banks using the current exposure method, credit exposure on bilaterally netted forward transactions will be calculated as the sum of the net marked-to-market replacement cost, if positive, plus an add-on based on the notional underlying principal.[4] The scale of add-ons to apply will be the same as those for non-netted transactions as set out in this Appendix. The [Basle] Committee will continue to review the scale of add-ons to make sure they are appropriate. In the case of foreign exchange contracts and other similar contracts, in which notional principal is equivalent to cash flows, total notional principal would be determined by reference to the pays or receipts with the netting counterparty on each value date, after taking account of netting of amounts falling due on each value date in the same currency. The reason for this is that offsetting contracts in the same currency maturing on the same date will have lower potential future exposure as well as lower current exposure.

The original exposure method may also be used for transactions subject to netting agreements which meet the above legal requirements until market risk-related capital requirements are implemented, at which time the original exposure method will cease to be available for netted transactions. The conversion factors to be used during the transitional period when calculating the credit exposure of bilaterally netted transactions will be as follows:

Maturity	Interest Rate Contracts	Exchange Rate Contracts
< 1 year	0.35%	1.5%
1-2 years	0.75%	3.75%
Each additional year	0.75%	2.25%

These factors represent a reduction of approximately 25% from those on page 29 of the Accord.

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[3] Thus, if any of these supervisors is dissatisfied about enforceability under its laws, the netting contract or agreement will not meet this condition and neither counterparty could obtain supervisory benefit.

[4] Supervisors will take care to ensure that the add-ons are based on effective rather than apparent notional amounts.

APPENDIX F

Basle Committee -- Framework for Applying Capital Requirements to Market Risks

APPENDIX F

Framework for Applying Capital Requirements to Market Risks

Two issues need to be addressed in determining a capital standard. The first is to calculate how much capital would be required to support varying portfolios of open positions in debt securities, equities and foreign exchange, including related derivative products. The second is to define how these capital charges should be met.

1. Capital Requirements

The capital charges proposed for debt securities and equities would apply to the current market value of items in banks' trading books.[1] Trading positions are understood to mean the bank's proprietary positions in financial instruments[2] which are taken on with the intention of benefitting in the short-term from actual or expected differences between their buying and selling prices or of hedging other elements of the trading book, or which are held for short-term resale, or in order to execute a trade with a customer. Inclusion in or exclusion of items from the trading book would be in accordance with objective procedures including, where appropriate, accounting standards in the institution concerned, such procedures and their consistent implementation being subject to review by the relevant supervisory authority.

Items not covered by these criteria, for example those which are not integral to the trading book, would continue to be subject to the present capital requirements for credit risk as set out in the 1988 Accord. The Basle Committee determined that it also seems reasonable to allow banks to exclude from their trading books derivative products which are taken on explicitly to hedge positions in the banking book. The members of the Basle Committee intend to carefully monitor the way in which banks allocate financial instruments between the trading book and other accounts and will seek to ensure through the examination process or other means that no abusive switching designed to minimize capital requirements occurs. In particular, they will be vigilant in seeking to prevent "gains trading" in respect of securities which are not marked to market through which banks improve their short-term profitability by realizing accrued profits and deferring the realization of losses. The Basle Committee will seek to clarify over time the appropriate distinction between the trading book and the other business of banks.

The proposals for debt securities and equities are based on the so called "building-block" approach which differentiates specific risk requirements from those for general market risk. Specific risk is the risk of loss caused by an adverse price movement of a security (or a derivative product linked to it) due principally to factors

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[1] The proposals for foreign exchange risk are designed to apply to banks' total currency positions, some of which would be reported at book value.

[2] Including positions in derivative products and interest rate instruments.

related to the issuer of the security. General market risk is the risk of loss caused by an adverse market movement unrelated to any specific security.

The proposals for foreign exchange risk are intended to apply specifically to banks, but they could equally well be used by other institutions. There is a two-step approach to the measurement of the risk here. The first task is to measure the exposure in each currency, where the main challenge is to decide how to treat derivatives involving foreign currency risk, especially options. The second task is to measure the risks inherent in a mix of long and short positions in different currencies.

While the present proposals cover the position risk in foreign exchange, debt securities and equities, they do not address counterparty credit risk. However, the 1988 Accord already covers the credit risk in some OTC derivatives by calculating the replacement cost of the contract, measured as the current mark-to-market value (if positive) plus an "add-on" to reflect the potential increase in the exposure over the remaining life of the contract.

Each bank affected by these proposals would be expected to monitor and report the outstanding position for each category of risk against which a capital requirement would be applied. The bank's overall minimum capital requirement would be:

(1) The existing credit risk requirements for the banking business, e.g., loans, investments and the counterparty risk on over-the-counter derivatives;

(2) The capital charges for debt and equity securities in the trading portfolio as subsequently described further in this section; and

(3) The charges for foreign exchange risk also described later in this section.

The market risk proposals could result in a higher or lower aggregate capital requirement than those to which banks are already subject under the present credit risk framework, depending on the risk profile of the individual institution. In the case of debt securities and equities held in the trading book, the proposed market risk charges would substitute for the credit risk weights presently applied to the balance-sheet assets. Whether this would lead to higher capital charges on balance would depend on the pattern of each bank's book and on the category of issuer. A bank with well-hedged positions or with significant holdings of high grade corporate debt securities could well have a lower capital requirement than at present. The measure in respect of foreign exchange risk would in principle be additive in the sense that no compensating reduction in credit risk is being proposed.

Although regular reporting would in principle take place only at intervals (in most countries quarterly), banks would be expected to manage the market risk in their trading portfolio in such a way that the capital requirements would be met on a continuous basis, i.e., at the close of each business day. Supervisors have at their disposal a number of effective measures to ensure that banks do not "window-dress" by showing significantly lower market risk positions on reporting dates. Banks would

also, of course, be expected to maintain strict risk management systems to ensure that intra-day exposures are not excessive.

In the belief that all risks should be captured when they arise, the Basle Committee proposed that all transactions, including forward sales and purchases, should be reported on a trade date basis. If, however, its use would not produce a material difference, the Committee suggested that national authorities could choose to allow settlement date reporting, so long as this was on a continuous basis.

2. Satisfying the Capital Charges

Once the capital charges have been calculated, the second step is to define how those requirements can be satisfied. The definition of capital for banks set out in the 1988 Accord differs from the definition of capital commonly used for securities firms and from the definition of capital in the EC's Capital Adequacy Directive. This can be justified by the nature of the risks stemming from traditional banking activities and the nature of the risks stemming from trading activities. In particular, banks' assets are often illiquid and not easily marked to market, and therefore are typically reported at book value. This treatment is consistent with the inherent going-concern nature of banking, in which recognizing short-term fluctuations in the value of assets held for the long-run is generally inappropriate. In contrast, trading positions are marked to market frequently, reflecting the shorter-term nature of these positions and the market risk to which they are exposed. Capital requirements for market risk thus tend to be far more volatile than those for credit risk and a more flexible source of capital may be considered appropriate.

APPENDIX G

Basle Committee -- Framework for Measuring the Risk of Holding or Taking Positions in Debt Securities and Equities in the Trading Account

APPENDIX G

Basle Committee Framework for Measuring the Risk of Holding or Taking Positions in Debt Securities and Equities in the Trading Account

The Basle Committee has proposed a minimum capital standard to cover the risk of holding or taking positions in debt securities in the trading account. The minimum capital requirements would be expressed in terms of two separately calculated charges, one applying to the "specific risk" of each security, whether it is a short or a long position, and the other to the interest rate risk in the portfolio, termed "general market risk," where long and short positions in different securities or instruments could be offset. The capital charge for specific risk would be designed to protect against an adverse movement in the price of an individual security. Capital requirements for general market risk would be designed to capture the risk of loss arising from changes in market interest rates.

1. Debt Derivatives

It is proposed to include in the measurement system those debt derivatives and off-balance sheet instruments which react to changes in interest rates and thus affect the reporting institution's exposure to market risk. This would include FRAs, futures and options on debt instruments, interest rate and cross-currency swaps and foreign exchange positions. A similar methodology would apply to other option-like products, such as caps, floors, and options on futures or swaps. In principle, all derivatives (except for those held outside the trading book) would be converted into positions in the relevant underlying and become subject to the proposals for applying specific and general market risk under the building-block methodology.

The Basle Committee has also proposed a minimum capital standard to cover the risk of holding or taking positions in equities and equity derivatives in the trading account. As with debt securities, it was proposed that the minimum standard for equities should be expressed in terms of the so called "building-block" approach. This means that the overall capital requirement would consist of separately calculated charges for the "specific" risk of holding a long or short position in an individual equity, and for the "general" market risk of holding a long or short position in the market as a whole. Specific risk has some parallels with, but is broader than, credit risk in the sense that it exists whether the position is long or short. General market risk is the risk of a broad market movement unrelated to any specific securities.

It was proposed that the building-block approach should apply in the following manner. The minimum standard would be expressed in terms of a "x plus y" formula, in which "x," denoting specific risk, would apply to the reporting institution's gross equity positions (i.e., the sum of all long equity positions and of all short equity positions) and "y," or general market risk, would apply to the difference between the sum of the longs and the sum of the shorts (i.e., the overall net position in an equity

market).

In setting appropriate charges for the "x plus y" formula, the Basle Committee proposed that the charge for "y" should be 8% of the net open position. This number was reached on the basis of analysis in collaboration with securities regulators of the price volatility of the principal equity indices in the major markets.

The criteria for determining the "x" factor for specific risk need to reflect the diversification of the portfolio and the extent to which it contains liquid and marketable stocks. It is important to ensure that a relatively high "x" factor applies unless the portfolio is both liquid and well-diversified. It is proposed that an appropriate "x" factor in the absence of any such assurances should be 8%.

Although the Basle Committee accepts that a lower "x" factor should apply for major institutions whose portfolios are liquid and diversified, it has proven extremely difficult to define liquidity and diversification in a sufficiently tight manner to be used for establishing a common minimum standard.

2. Equity Derivatives

The Basle Committee proposed to include in the measurement system equity derivatives and off-balance sheet positions which are affected by changes in equity prices. This would include futures and options on both individual equities and on equity indices, as well as instruments with option-like characteristics such as options on futures and warrants. In principle, all derivatives (except for those held outside the trading book) would be converted into positions in the relevant underlying and become subject to the proposals.

APPENDIX H

Discussion of the Group of Thirty Report -- Derivatives: Practices and Principles

APPENDIX H

GROUP OF THIRTY-SPONSORED REPORT -- *DERIVATIVES: PRACTICES AND PRINCIPLES*

The Group of Thirty[1] sponsored a study on derivatives entitled Derivatives: Practices and Principles (the "Study") released on July 21, 1993.[2] The authors of the report included senior managers from firms that are dealers and end-users of derivatives, and individuals from the related legal, accounting, and academic disciplines. Those who participated in the preparation of the Study were from North America, Europe and Japan. The Study focuses almost exclusively on Over-the-Counter (OTC) derivatives, vs. exchange-traded derivatives.[3]

The Study consists of a Recommendation section which sets forth 20 recommendations for industry practitioners and 4 recommendations for legislators and regulators. The Study also contains an Overview of Derivatives Activity, and three Appendices.

The Overview of Derivatives section defines derivatives and discusses the related risks and risk management. The Overview also discusses the uses of derivatives, includes examples of such use, and quantifies the growth and composition of derivatives activity.

The Appendices contain the Study's detailed background materials. Appendix I contains the six working papers that form the basis of the Study and whose analysis supports the Recommendations. Appendix II is a compilation of legal memoranda discussing issues of enforceability in the jurisdictions in nine countries. Appendix III summarizes the findings of the Survey of Industry Practice conducted for the Study; a group of 80 dealers and 72 end-users responded to a questionnaire.

The Recommendations focus on risk management practices of practitioners and on promoting harmonization and clarification of the legal, tax, and accounting standards currently applied to derivatives activity. The Forward to the Study states: "As private participants in derivatives activity, the authors of the Study deliberately intruded little on the domain of the regulators. That is perhaps most apparent in the virtual absence of comment about the appropriate level of capital requirements, an issue currently under regulatory review. Plainly, the authors believe that the amount of capital needed to support derivatives exposure is a matter of judgment for individuals institutions,

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[1] An international panel based in Washington, DC of industry, legal and academic representatives, supported by the major institutional participants in the global financial markets.

[2] In the Forward of the Study, the Chairman of the Group of Thirty, Mr. Paul Volker, states: "The Recommendations for the management of derivatives activity have the unanimous endorsement of the Steering Committee [of the Study]. While the Study has been sponsored and supported by the Group of Thirty, I should note that, as with all our study group reports, it does not represent an official view of the Group [of Thirty]. Nor does it necessarily represent the views of the Group of Thirty members except those who served on the Steering Committee." The Chairman of the Steering Committee of this Study was Dennis Weatherstone, Chairman of J.P. Morgan.

[3] OTC derivatives are customized derivatives, not traded on organized exchanges. OTC derivatives include all swaps, most forwards, and some options. Exchange-traded derivatives are standardized derivatives traded on organized exchanges, and include all futures, and most options.

depending upon their appetite for risk and their ability to measure and manage it. That belief is not necessarily inconsistent with the view of the regulators, who see the problem from a systemic perspective and conclude that certain minimum capital standards are appropriate as well."

Regarding the regulation of derivatives activity, the Forward to the Study continues by stating: "The general attitude of the Study towards of regulation is plain: derivatives by their nature do not introduce risks of a fundamentally different kind or of a greater scale than those already present in the financial markets. Hence, systemic risks are not appreciably aggravated, and supervisory concerns can be addressed within present regulatory structures and approaches. Where the official priority should be placed, in the view of the Study, is in clarifying legal uncertainties, and resolving legal inconsistencies between counties, that may impede risk reduction procedures such as netting."

The Introduction to the Study further discusses regulation of derivatives by stating: "Banking supervisors have conducted several studies into the implications of derivatives for the financial system. None of these studies concluded that derivatives significantly increase systemic risk but neither did they find cause for complacency ... this Study does not conclude that any fundamental changes in the current regulatory framework such as separate regulation of this activity, are needed. Separate regulation of global derivatives would be at cross-purposes with the existing framework of supervision, with its focus on the common risks contained in derivatives and traditional instruments. There is also a danger in imposing regulatory formulas that inhibit new product innovation or discourage firms from developing the individualized, robust risks management systems on which they should rely."

Recommendations for Dealers and End-Users

The 20 Recommendations for Dealers and End-Users of derivatives are set forth below. A brief discussion on each recommendation includes the general level of industry compliance with such recommendations based upon the Survey of Industry Practice (the "Survey") conducted for the Study.[4] A group of 80 dealers and 72 end-users responded to the Survey questionnaire. For a detailed discussion of the recommendations, please refer to the Study.

General Policies

Recommendation 1: The Role of Senior Management - Dealers and end-users should use derivatives in a manner consistent with the overall risk management and capital policies approved by their boards of directors. These policies should be reviewed as business and market circumstances change. Policies governing derivatives use should be clearly defined,

[4] It should be noted that the results of the survey are based on the number of firms who comply, regardless of each firm's volume of activity. Since the volume of activity is concentrated in a smaller number of firms, the compliance rate if based on volume of activity would generally be higher than that which is quoted in the report.

including the purposes for which these transactions are to be undertaken. Senior management should approve procedures and controls to implement these policies, and management at all levels should enforce them.

It was stated by the authors of the Study in several presentations that this recommendation is the recommendation with the "highest priority."

Valuation and Market Risk Management

Recommendation 2: Marking to Market - Dealers should mark their derivatives positions to market, on at least a daily basis, for risk management purposes.

According to the Survey, the practice of marking to market daily is widespread among dealers.

Recommendation 3: Market Valuation Methods - Derivatives portfolios of dealers should be valued based on mid-market levels less specific adjustments, or on appropriate bid or offer levels. Mid-market valuation adjustments should allow for expected future costs such as unearned credit spread, close-out costs, investing and funding costs, and administrative costs.

According to the Survey, a wide range of practices concerning the mark-to-market method and the use of adjustments are used. The most commonly used adjustments are for credit and administrative costs.

Recommendation 4: Identifying Revenue Sources - Dealers should measure the components of revenue regularly and in sufficient detail to understand the sources of risk.

The Survey indicates that few dealers identify individual sources of revenue.

Recommendation 5: Measuring Market Risk - Dealers should use a consistent measure to calculate daily the market risk of their derivatives positions and compare it to market risk limits.

- *Market risk is best measured as "value at risk" using probability analysis based upon a common confidence interval (e.g., two standard deviations) and time horizon (e.g., one-day exposure.)*
- *Components of market risk that should be considered across the term structure include: absolute price or rate change (delta); convexity (gamma); volatility (vega); time decay (theta); basis or correlation; and discount rate (rho).*

"Value at risk" is defined in the Study as the expected loss from an adverse market movement with a specified probability over a particular period of time. For example, with 97.5% probability (a "confidence interval" of 97.5%), corresponding to calculations using about two standard deviations, a value at risk figure is designed to predict that any change in portfolio value over one day resulting from an adverse market movement will not exceed a specific amount. Conversely, there is a 2.5% probability of experiencing an adverse change in excess of the calculated amount.

According to the Study, once a method of risk measurement is in place, market risk limits must be decided based on factors such as: management tolerance for low probability extreme losses versus higher probability modest losses, capital resources, expected profitability, and business strategy.

The Survey suggests that most dealers know and consider some or all of the components of market risk. However, the use of one consistent measure of market risk, such as value at risk, is more prevalent among large dealers.[5]

Recommendation 6: Stress Simulations - Dealers should regularly perform simulations to determine how their portfolios would perform under stress conditions.

The Study suggests that the stress scenarios should include not only abnormally large market swings but also periods of prolonged inactivity.

The Survey indicates that some stress testing is being conducted, mainly by large dealers, and that broader usage is planned.[6]

Recommendation 7: Investing and Funding Forecasts - Dealers should periodically forecast the cash investing and funding requirements arising from their derivative portfolios.

The Survey indicates that at present, half of the responding dealers are conducting forecasts of cash investing and funding requirements.

Recommendation 8: Independent Market Risk Management - Dealers should have a market risk management function with clear independence and authority, to ensure that the following responsibilities are carried out:

- *The development of risk limit policies and the monitoring of transactions and positions for adherence to these policies. (See Recommendation 5.)*
- *The design of stress scenarios to measure the impact of market conditions,*

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[5] For comments made by regulators on market risk disclosure, see the discussion of Question #13 posed to regulators by Rep. Leach.

[6] For comments made by regulators regarding stress tests, see the discussion of Question #16 posed to regulators by Rep. Leach.

however improbable, that might cause market gaps, volatility swings, or disruptions of major relationships, or might reduce liquidity in the face of unfavorable market linkages, concentrated market making, or credit exhaustion. (See Recommendation 6.)

- *The design of revenue reports quantifying the contribution of various risk components, and of market risk measures such as value at risk. (See Recommendations 4 and 5.)*

- *The monitoring of variance between the actual volatility of portfolio value and that predicted by the measure of market risk.*

- *The review and approval of pricing models and valuation systems used by front and back-office personnel, and the development of reconciliation procedures if different systems are used.*

The Study states that the growth of activities in derivatives and other financial instruments has led many firms to establish market (and credit) risk management functions to assist senior management in establishing policies and procedures applicable to various activities.

According to the Survey, a large majority of dealers already have such a function in place, and over 50% of those that do not plan to establish one in the near future.

Recommendation 9: Practices by End-Users - As appropriate to the nature, size, and complexity of their derivatives activities, end-users should adopt the same valuation and market risk management practices that are recommended for dealers. Specifically, they should consider: regularly marking to market their derivatives transactions for risk management purposes; periodically forecasting the cash investing and funding requirements arising from their derivatives transactions; and establishing a clearly independent and authoritative function to design and assure adherence to prudent risk limits.

The Study states that derivatives are customer-specific positions, often designed to offset precisely the market risk of an end-user's business position. End-users should establish the performance assessment and control procedures that are appropriate for the nature and scale of their derivatives activities.

Less than half of those end-users surveyed currently mark their derivatives hedges to market for risk management purposes. About half plan to do so.

Credit Risk Measurement and Management

Recommendation 10: Measuring Credit Exposure - Dealers and end-users should measure credit exposure on derivatives in two ways:

- *Current exposure, which is the replacement cost of derivatives transactions, that is, their market value.*

- *Potential exposure, which is an estimate of the future replacement cost of derivatives transactions. It should be calculated using probability analysis based upon broad confidence intervals (e.g., two standard deviations) over the remaining terms of the transactions.*

The Survey shows that dealers use several different methods for calculating credit exposures. These include: the BIS original and current exposure methods, used by one-third of all dealers; methods based on worst-case scenarios applied to each transaction, used by about a quarter of dealers and expected to become the most common in the futures; and methods that rely upon tables of factors, used by almost 40% of dealers. End-users tend to rely on simpler methods primarily based on notional amounts.

Recommendation 11: Aggregating Credit Exposure - Credit exposures on derivatives, and all other credit exposures to a counterparty, should be aggregated taking into consideration enforceable netting arrangements. Credit exposures should be calculated regularly and compared to credit limits.

If netting applies, the current exposure is the sum of positive and negative exposures on transactions in the portfolio.

The Survey suggests that most dealers monitor gross credit use against limits. Aggregating current and potential exposures by counterparty on a net basis is not common among dealers, although some who do not net at present plan to do so in the future. Frequent monitoring of credit exposure is widespread among dealers, with three-quarters of respondents monitoring either intraday or overnight. The majority of end-users monitor credit exposures at least once a month.

Recommendation 12: Independent Credit Risk Management - Dealers and end-users should have a credit risk management function with clear independence and authority, and with analytical capabilities in derivatives, responsible for:

- *Approving credit exposure measurement standards.*

- *Setting credit limits and monitoring their use.*

- *Reviewing credits and concentrations of credit risk.*

- *Reviewing and monitoring risk reduction arrangements.*

According to the Survey, most dealers and some end-users have an independent credit risk management group. For end-users, this role may not necessarily be

performed by a separate group; however, the credit risk should, according to the Study, be managed independently from dealing personnel.

Recommendation 13: Master Agreements - Dealers and end-users are encouraged to use one master agreement as widely a possible with each counterparty to document existing and future derivatives transactions, including foreign exchange, forwards and options. Master agreements should provide for payments netting and close-out netting, using a full two-way payments approach.

A single master agreement that documents transactions between two parties creates the greatest legal certainty that credit exposure will be netted. The use of multiple master agreements between two parties introduces the risk of "cherry-picking" among master agreements, rather than among individual transactions.

Full two-way payments, as opposed to limited two-way payments, is now the preferred payments approach in master agreements. Under full two-way payments, the net amount calculated through the netting provisions in a bilateral master agreement is due regardless of whether it is to, or from, the defaulting party. (Under limited two-way payments, the defaulting party is not entitled to receive anything, even if the net amount is in its favor.)

According to the Survey, two-fifths of all dealers now document derivatives transactions under a multi-product master, and more plan to do so in the future.

Recommendation 14: Credit Enhancement - Dealers and end-users should assess both the benefits and costs of credit enhancement and related risk-reduction arrangements. where it is proposed that credit down-grades would trigger early termination or collateral requirements, participants should carefully consider their own capacity and that of their counterparties to meet the potentially substantial funding needs that might result.

Credit enhancement arrangements include collateral and margin arrangements, third-party credit enhancements such as guarantees or letters of credit, and structural credit enhancement through the establishment of special-purpose subsidiaries to conduct derivatives business.

The Survey indicates that about two-thirds of dealers are prepared to accept credit enhancement with cash or securities as collateral, and over three-quarters accept a third party guarantee or enhancements. Reflecting strong dealer credit ratings, only one-third are prepared to provide cash or securities as collateral and only 10% or so will offer a third party guarantee.

Enforceability

Recommendation 15: Promoting Enforceability - Dealers and end-users should work

together on a continuing basis to identify and recommend solutions for issues of legal enforceability, both within and across jurisdictions, as activities evolve and new types of transactions are developed.

The Study states that dealers regularly develop new types of transactions, and new technologies are developed to confirm them. These developments may not fit clearly within the current legal framework in the jurisdictions where transactions occur. Therefore, according to the Study, dealers and end-users should continue to evaluate developments in light of existing laws and regulations.

Systems, Operations, and Controls

Recommendation 16: Professional Expertise - Dealers and end-users must ensure that their derivatives activities are undertaken by professionals in sufficient number and with the appropriate experience, skill levels, and degrees of specialization. These professionals include specialists who transact and manage the risks involved, their supervisors, and those responsible for processing, reporting, controlling, and auditing the activities.

The Survey indicates that, for the majority of respondent dealers, senior management is confident about the general quality of its derivatives professionals, although some expressed concern regarding support staff. To the extent that senior management are concerned about issues of professionalism, they are more worried about their own lack of understanding, about insufficient understanding of derivatives by other functions, and about over-reliance on a few specialists.[7]

Recommendation 17: Systems - Dealers and end-users must ensure that adequate systems for data capture, processing, settlement, and management reporting are in place so that derivatives transactions are conducted in an orderly and efficient manner in compliance with management policies. Dealers should have risk management systems that measure the risks incurred in their derivatives activities including market and credit risks. End-users should have risk management systems that measure the risks incurred in their derivatives activities based upon their nature, size, and complexity.

The size and scope of the required systems will depend upon the nature and scale of an organization's derivatives transactions.

According to the Survey, confirmations of transactions, for example, are automated for about 40% of dealers, 10% are partially automated, and 45% are not automated. Eighty percent of the dealers plan to automate their confirmations completely. In addition, large dealers have made significant investments to integrate back- and front-office systems for derivatives with their firms' other management information systems.

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[7] For comments made by regulators regarding this matter, see the discussion of Question #19 posed to the regulators by Rep. Leach.

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Recommendation 18: Authority - Management of dealers and end-users should designate who is authorized to commit their institutions to derivatives transactions.

Two-thirds of dealers responding to the Survey involve senior management in authorizing traders to commit the firm.

Accounting and Disclosure

Recommendation 19: Accounting Practices - International harmonization of accounting standards for derivatives is desirable. Pending the adoption of harmonized standards, the following accounting practices are recommended:

- *Dealers should account for derivatives transactions by marking them to market, taking changes in value to income each period.*
- *End-users should account for derivatives used to manage risks so as to achieve a consistency of income recognition treatment between those instruments and the risks being managed. Thus, if the risk being managed is accounted for at cost (or, in the case of an anticipatory hedge, not yet recognized), changes in the value of a qualifying risk management instrument should be deferred until a gain or loss is recognized on the risk being managed. Or, if the risk being managed is marked to market with changes in value being taken to income, a qualifying risk management instrument should be treated in a comparable fashion.*
- *End-users should account for derivatives not qualifying for risk management treatment on a mark-to-market basis.*
- *Amounts due to and from counterparties should only be offset when there is a legal right to set off or when enforceable netting arrangements are in place.*

Where local regulations prevent adoption of these practices, disclosure along these lines is nevertheless recommended.

Accounting policies for derivatives vary widely around the world. In some countries, there are local accounting standards that address accounting for derivatives; in other countries there are no specific standards and a variety of customs and practices have developed.

The recommendation for dealers to account for changes in the value of their derivatives positions in income during each period has become standard in many, although not all, countries.

The recommended accounting treatment for end-users using derivatives to manage risks, referred to as "risk management accounting," is also a standard treatment, according to the Study.

Among a majority of dealers who responded to the Survey, senior management thought inconsistency of accounting standards with the economics of the business were either of serious or some concern.

Recommendation 20: Disclosures - Financial statements of dealers and end-users should contain sufficient information about their use of derivatives to provide an understanding of the purposes for which transactions are undertaken, the extent of the transactions, the degree of risk involved, and how the transactions have been accounted for. Pending the adoption of harmonized accounting standards, the following disclosures are recommended:

- *Information about management's attitude to financial risks, how instruments are used, and how risks are monitored and controlled.*
- *Accounting policies.*
- *Analysis of positions at the balance sheet date.*
- *Analysis of the credit risk inherent in those positions.*
- *For dealers only, additional information about the extent of their activities in financial instruments.*

The Survey shows that the quality of financial statement disclosures about derivatives transactions varies more widely than the accounting policies that are applied. Inadequate public disclosure of exposures of counterparties is of some concern, or of serious concern, to about three-fifths of senior management among dealers responding to the Survey.

Interesting to note is that certain dealers with whom Minority Staff spoke have decided to disclose more than is currently required. They feel that more disclosure has benefited them as the risks associated with their derivatives activities is less than others might imagine in the absence of such disclosures. There seems to be disagreement among participants as to whether the disclosure requirements for certain foreign participants, which tend to be less extensive, has been a disadvantage to U.S. participants.

Recommendations for Legislators, Regulators, and Supervisors

The four Recommendations for Legislators, Regulators, and Supervisors of derivatives are set forth below. For a detailed discussion of the recommendations, please refer to the Study.

Recommendation 21: Recognizing Netting - Regulators and supervisors should recognize the benefits of netting arrangements where and to the full extent that they are enforceable, and encourage their use by reflecting these arrangements in capital adequacy standards. Specifically, they should promptly implement the recognition of the effectiveness of bilateral close-out netting in bank capital regulations.

Significant efforts have been made to develop standard master agreements that effect netting across the full range of derivatives products. Nonetheless, the enforceability of such netting provisions remains among the highest concerns of senior management of derivatives dealers, according to the Survey.[8]

Recommendation 22: Legal and Regulatory Uncertainties - Legislators, regulators, and supervisors, including central banks, should work in concert with dealers and end-users to identify and remove any remaining legal and regulatory uncertainties with respect to:

- *The form of documentation required to create legally enforceable agreements (statute of frauds).*
- *The capacity of parties, such as governmental entities, insurance companies, pension funds, and building societies, to enter into transactions (ultra vires).*
- *The enforceability of bilateral close-out netting and collateral arrangements in bankruptcy.*
- *The enforceability of multibranch netting arrangements in bankruptcy.*
- *The legality/enforceability of derivatives transactions.*[9]

According to the Study, it is important to approach these legal and regulatory issues aggressively so that the largest risks faced by dealers and end-users are not legal risks from systems that have not kept pace with financial developments.

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[8] A step toward recognizing netting was taken in April 1993 when the Basle committee released a Consultative Paper that included a proposal for recognizing the effectiveness of close-out netting. This is an amendment to the agreed framework for measuring bank capital adequacy, referred to as the Basle Accord published in 1988.

[9] These five main enforceability risks are analyzed for nine major jurisdictions in Appendix II of the Group of Thirty Study.

Recommendation 23: Tax Treatment - Legislators and tax authorities are encouraged to review, and, where appropriate, amend tax laws and regulations that disadvantage the use of derivatives in risk management strategies. Tax impediments include the inconsistent or uncertain tax treatment of gains and losses on the derivatives, in comparison with the gains and losses that arise from the risks being managed.

The Study states that in most, if not all, jurisdictions the tax treatment being applied to derivatives transactions dates back to before they came into general use. This can lead to considerable uncertainty in determining how gains and losses associated with these instruments should be taxed depending upon their use. According to the Study, these uncertainties and inconsistencies present real difficulties to organizations that seek to use derivatives to manage risks in their businesses; confusion can discourage them from pursuing commercially sensible risk management strategies.

Recommendation 24: Accounting Standards - Accounting standards-setting bodies in each country should, as a matter of priority, provide comprehensive guidance on accounting and reporting of transactions in financial instruments, including derivatives, and should work towards international harmonization of standards on this subject. Also, the International Accounting Standards Committee should finalize its accounting standard on Financial Instruments.

At present, no country has accounting and reporting standards that comprehensively address all financial instruments, including derivatives. Even in those countries where development of accounting standards is considered far advanced, there are gaps or inconsistencies between different standards.

In a number of countries, accounting standard-setting bodies have recognized the need to improve accounting standards in these areas and some have commenced work. Furthermore, the International Accounting Standards Committee (IASC) has issued an exposure draft on Financial Instruments (E40) and presently intends to finalize an accounting standard by the end of 1993.

Implementation of the Study's Recommendations

In general, the Study has been characterized by interested parties, including regulators, as one which has set forth useful recommendations to be used as a "benchmark" for sound industry practice and effective regulation.

The regulators were asked by Minority Staff for their comments on the Study and whether or not the recommendations contained in the Study should be formally mandated by regulation.[10] In general, the regulators did not feel that the

[10] For comments made by regulators regarding the Study, see the discussions of Questions #8(c), #9, and #10 posed to the regulators by Rep. Leach.

recommendations should be mandated by regulation, but will consider the recommendations when reviewing their policies, procedures, and need for regulation. The SEC stated that, generally, the SEC has a mechanism in place, namely its risk assessment rules, to ensure that certain recommendations set forth in the Study are implemented with regard to registered broker-dealers. The FED stated: "As markets continue to develop and as further experience is obtained by industry participants, it is likely that these recommendations will be further refined. It is important then that the regulatory framework not inadvertently inhibit the development of further refinements or practices that may be developed in response to changes in technology, products or markets."

Therefore, as tomorrow's market circumstances and market participants may not be the same as today's, care must be taken to insure that we do not have a least common denominator approach taken to regulation which might be adequate for one kind of institution in one time frame.[11] For example, according to the FDIC: "In fact, should these recommendations be codified by regulation, the general lack of originality and specificity in the Study may actually hinder effective supervision by encouraging adoption by the industry of minimal standards."

Many market participants are conducting internal reviews to ascertain current and anticipated future compliance with the Study's recommendations. In addition, the International Swap and Derivatives Association (ISDA) has announced a series of conferences to educate market participants about the recommendations and to assist them in complying with the recommendations. ISDA is also updating legal opinions and drafting model legislation regarding various issues. ISDA has also announced that it will conduct a survey of market participants a year from now to determine how the market has responded to the recommendations.[12]

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[11] See statement of Ranking Member Jim Leach before the Group of Thirty and the Federal Reserve Board dated September 27, 1993.

[12] See statement entitled "G-30 and Beyond" given by Joe Bauman in London on September 23, 1993 stating ISDA's commitment to implementation of the Group of Thirty Study.

APPENDIX I

Glossary

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GLOSSARY

Accrued Interest: *Interest earned but not yet due and payable. The buyer of a bond pays the seller the agreed price of the bond, plus interest accrued since the last interest payment date up to and including the value date.*

Actual/Actual Basis: *Basis for quoting rates that assumes actual number of days/actual number of days in a year.*

Add-ons: *The term used in the 1988 Basle capital accord that denotes the amounts added to the credit equivalent value of derivative contracts to reflect potential credit exposures arising from future price or volatility changes. Add-ons are calculated on the basis of notional principal values, and vary according to the nature of the derivative instrument and its maturity.*

After-Tax-Yield: *The annualized percentage return a security pays, net of income withholding and capital gains taxes.*

Agent: *A person who acts on behalf of another party, i.e. the principal. The agent is presumed to be subject to the control of the principal.*

Agent Bank: *In the context of floating rate securities, its primary responsibility is to determine the interest rate on such securities. In the context of ECP and CD facilities, an Agent Bank is generally also responsible for the issuing and paying agent functions, as well as the normal functions of an agent bank to a syndicated bank loan.*

Aggregation: *A term used in connection with the calculation of payments to be made upon early termination of swaps documented under a master agreement; calls for netting of positive and negative values of the swaps affected by early termination, to the extent agreed by the parties.*

AIRS Terms: *Recommended terms and conditions for Australian dollar fixed/floating interest rate swaps done in the Australian market, similar to the BBAIRS terms.*

All-in Cost (AIC): *Internal rate of return of the fixed cash flows versus the flow of the floating index flat. Also known as the Cost of Swap. Expressed as semi-annual rate or as a basis point spread to the semi-annual bond equivalent of the U.S. Treasury yield curve (in the U.S. dollar market).*

American Option: *A put or call that can be exercised any time prior to expiration.*

American Stock Exchange (New York): *Index Options: Computer Technology Index, Institutional Index, Major Market Index, Oil Index. Interest Rate Options: U.S. Treasury bills, U.S. Treasury notes.*

Amex Commodities Corporation (New York): *Options: gold bullion.*

Amortization: *The repayment of debt by the borrower in a series of installments over a period of time, as in the retirement of debt by a purchase fund or through the operation of a sinking fund.*

Amortizing Rate Swap (or Index Amortizing Rate): *Swap in which the notional principal on at least one*

of the legs changes during the term of the swap according to a predetermined schedule. Often done to hedge a borrowing that is repaid in installments. Swaps with an increasing notional amount are sometimes referred to as step-up swaps.

Arbitrage: *The purchase of a security in one market and the simultaneous sale of that security or its equivalent in the same market or other markets, for the purpose of profiting from the price differential and/or spread prevailing because of conditions peculiar to each market. A switch done between two similar issues for the same purpose.*

ARBL (Assets Repriced Before Liabilities): *If rates rise, we will increase our profits if we are able to reprice our assets at higher levels before we reprice our liabilities. The reserve is true if rates are falling.*

Areas Swap: *Swap in which one set of payments is based on an index (e.g. LIBOR) set in arrears.*

Asked Price: *The price at which a seller is willing to sell.*

Asset-Liability Management: *The matching of an institution's level of debt and amount of assets. Financial institutions carry out asset-liability management by matching the maturity of their deposits with the length of their loan commitments. This helps guard against adverse affects from rapid changes in interest rates.*

Asset-Swaps: *A swap that transforms the cash flows (interest income) from an underlying asset. The swap arranger purchases a bond from the bond traders at or below par, plus accrued interest. The bond is then sold to a third party at par, net of accrued interest, with any differences in market price rolled into the swap coupon.*

Assignment: *Sale of a swap contract to a third party. Swaps that allow an institution to step out and substitute another counterparty are assignable.*

Association of International Bond Dealers (AIBD): *As association with over 500 member firms from 30 countries. The primary objectives of the AIBD are to provide a basis for examination and discussion of questions relating to the secondary market in Eurosecurities, to issue rules governing their functions, and to maintain a close liaison between the primary and secondary markets in Eurosecurities.*

At-market option: *An option for which the strike price is equal to the current market price for the underlying currency or futures contract.*

Average Life: *The weighted average maturity of an issue or set of securities after taking into account the amortization provisions.*

Backroom Operations: *Segregated supporting or control functions.*

Basis or Spread Risk: *The risk that the relationship between the prices of two similar, but not identical, instruments of comparable maturity will change. The risk is referred to as basis risk in the context of an imperfect hedge and as spread risk when the risk is willingly taken on.*

Basis Point: *One-hundredth of one percentage point, most often used in quotation of spreads between interest rates or to describe changes in yields on securities.*

Basis Risk: *The "basis" is the difference between the cash price and the futures price of a security or commodity. In establishing futures hedges, banks must first identify and quantify the exposure to be*

hedged and then purchase or sell an appropriate number of futures contracts to offset any price movement for the hedged cash position. Basis relationship fluctuate over time, however, and can change the extent to which the contracts provide a completely effective hedge. Consequently, the contracts may either become more profitable or costly to the holder than originally planned.

Basis Swap: *Interest payments exchanged are calculated from two different floating rate indices, e.g. three-month dollar LIBOR against the U.S. commercial paper composite rate.*

BBAIRS Terms: *British Bankers Association recommended terms and conditions for interest rate swaps; intended to be used in the London inter-bank market with maturities up to and including two years; published in 1985.*

Bear Market: *A market characterized by a trend of falling prices, in which there are more sellers than buyers.*

Bearer Participation Certificates (BPC): *These are issued by an intermediary corporation, usually a major bank or a trust company, in the case where a borrower is unable to issue securities into the Euromarket directly or through a finance company vehicle. The lead-managers pays the proceeds of such an issue to the intermediary corporation which then advances such proceeds to the borrower under a credit agreement. The intermediary corporation then delivers the BPC securities to the lead-manager for delivery to the subscriber.*

Bearer Security: *A negotiable security whose title is to the bearer, i.e. it is presumed in law to the owned by its holder. Title to bearer securities are transferred by deliver.*

Bearish: *A market view or opinion that expects lower prices.*

Benchmark Bond: *A bond, frequently the most recent, sizeable issue, whose terms set a standard for the market. The benchmark bond usually has the greater liquidity, the highest turnover, and is the most frequently quoted. In certain markets (e.g. the Japanese), there is a seasoning period during which the bond is not the benchmark.*

Benchmark Rate: *The base rate off which swap spreads are quoted. For U.S. $ swap, the benchmark rate is the rate for U.S. Treasuries.*

Beneficial Owner: *That person or institution to whom the benefits of a security's ownership will ultimately accrue.*

Beta: *A measure of how a stock's price movement compares to the movement of the entire market.*

Bid/Offer Price: *The price or yield on an instrument at which a dealer is willing to buy or sell upon request. The spread between bid and offer quotes is the price of the liquidity service provided by the dealer.*

Bid/Offer Spread: *The difference between the buying and selling price of an instrument.*

Bilateral Netting: *A proposed method for determining credit risk exposure positions which permits the offsetting of positions or payment obligations between two parties whereby a large number of individual positions or payment obligations are reduced to one single position or payment obligation, such that in the event of a counterparty's failure to perform due to default, bankruptcy or liquidation, the other counterparty would have a claim or payment obligation to receive or pay only the net value of the sum of unrealized gains and losses on all transactions.*

BIS: Bank for International Settlements.

Bond: An interest bearing or discounted certificate of debt, under the terms of which a borrower contracts, inter alia, to pay the holder a fixed principal amount on a stated future date and, in the case of an interest bearing bond, usually a series of interest payments during its life. More specifically, a long-term debt instrument. In this sense, it may also be referred to as a debenture. Note: In certain domestic markets, the term "bond" and "debenture" differ with respect to security. For instance, in the U.S., a bond is usually secured, while a debenture is unsecured. In the U.K., a debenture is usually secured, while a bond is usually unsecured. Virtually all Eurobonds issued to date have been unsecured.

Bond Basis: Calculation of interest on basis of 30/360. That is, every year is deemed to consist of 360 days (12 months of 30 days). Money market basis quote = Bond basis quote x 360/365.

Book: Group of instruments managed together; portfolio.

Book Loss: The difference between the original cost or book value of a security and its lower market value, i.e. an unrealized loss. This term also refers to an unrealized loss which arises from re-writing book value.

Book Value: The value of a security, as shown by the accounting records of the investor, but which is not necessarily identical to the security's market value.

Book Yield: The current yield or yield-to-maturity of a security, calculated using its book value instead of the current market price. This term is typically used in the U.S. domestic market.

Broker: A person or firm acting as an agent for buyers and sellers and charging a commission for his services, but who does not buy or sell for his own account.

Brokered Market: Market where agents, called brokers, are employed to search for a compatible trading partner for a fee.

Brokering: Acting as agent for a customer for the purpose of buying and selling equity securities, and charging a commission for the service.

Caps: An option-like contract for which the buyer pays a fee, or premium, to obtain protection against a rise in a particular interest rate above a certain level. For example, an interest rate cap may cover a specified principal amount of a loan over a designated time period such as a calendar quarter. If the covered interest rate rises above the rate ceiling, the seller of the rate cap pays the purchaser an amount of money equal to the average rate differential times the principal amount times one quarter.

Bulldog Bond: A United Kingdom foreign bond.

Bullet or Bullet Maturity: An issue of securities with no amortization features.

Bull Market: A market characterized by a trend of rising prices, where there are more buyers than sellers.

BUNDS: The German government long-term bonds (generally 10 years).

Business Day: In the Euromarkets, when the two related markets are open for banking business, e.g. in the Eurodollar market, a day when both London and New York banks are open for business. In the U.S. domestic market, any date excluding Saturdays, Sundays and legal or statutory holidays on which business

can be conducted.

Buy-In: *The purchase of a security in the open market at market prices to complete delivery of a failed transaction. If the original seller of a security fails to make good delivery of that security within a period of time, the buyer can, upon notification to the sell and after continued failure to deliver effect a buy-in through a third party.*

Call: *An option giving the buyer the right, but not the obligation, to buy a specific quantity of an asset, at a fixed price, on or before a fixed date in the future, for a fee or premium.*

Callable Swap: *A swap with an option to terminate under specific circumstances.*

Cap: *Interest rate protection which limits the maximum floating interest rate the client must pay. For this protection, the client pays a premium up front.*

Cap/Floor Parity: *An extension of the relationship between puts and calls (Put-Call Party) as applied to caps and floors with swaps as the underlying security. Conceptually, a long position in a cap combined with a short position in a floor must have the same value as a swap in which one pays the fixed rate.*

Capital Gain: *The difference between an asset's purchase price and selling price, when the difference is positive.*

Cash Liquidity/Funding Risk: *The risk that an individual firm will be unable to fund assets or meet short-term cash settlement obligations at all times at reasonable cost or at all. Some participants identified the cash requirements that could arise in connection with derivative portfolios following a price or volatility change as a major source of cash liquidity risk.*

Cash Settlement: *The delivery of securities against payment where the settlement date is the same as the trade date. This term is typically used in the U.S. money markets.*

Certificate of Deposit: *A negotiable certificate, issued by a bank, evidencing an interest bearing or discounted time deposit of fixed maturity with the bank. If interest bearing, it may have either a fixed rate or a floating rate of interest.*

Chicago Board of Trade (Chicago): *Futures: corn, gold, Government National Mortgage Assoc. mortgages, Major Market Index, Major Market Index "MAXI," Municipal Bond Index, NASDAQ-100 Index, oats, silver, soybeans, soybean meal, soybean oil, U.S. Treasury bonds, U.S. Treasury notes, wheat. Futures options: corn, silver, soybeans, U.S. Treasury bonds, U.S. Treasury notes.*

Chicago Board Options Exchange (Chicago): *Foreign Currency Options: British pound, Canadian dollar, Deutsche mark, French franc, Japanese yen, Swiss franc. Index Options: Standard & Poor's 100 Index, Standard & Poor's 500 Index, Standard & Poor's Over The Counter 250 Index. Interest rate options: U.S. Treasury bonds, U.S. Treasury notes.*

Chicago Mercantile Exchange (Chicago): *Futures: feeder cattle, live cattle, live hogs, lumber, Over The Counter 250 Industrial Stock Price Index, pork bellies, Standard & Poor's 100 Index, Standard & Poor's 500 Index. Futures options: British pound, Deutsche mark, Eurodollars, live cattle, live hogs, Standard & Poor's 500 Stock Index, Swiss franc.*

Chicago Rice and Cotton Exchange (Chicago): *Futures: rough rice, short staple cotton.*

Clear or Settle: The process by which ownership of a security or product is transferred. The trade is consummated by delivery of securities in proper form to the buyer and by payment of funds to the seller. Trades that are not cleared by the settlement date are said to fail.

Clearing House Bank: A bank in the U.S. authorized by the Federal Reserve Board to process the payment of checks.

Clearing House Funds or New York Clearing House Funds: These are represented by checks drawn on a Clearing House bank in New York City, which are now known as Federal funds and have good value the day after being deposited. Such funds are no longer the main method of effecting settlements in the European and U.S. capital markets.

Clearing System (or Clearing House Arrangement): A mechanism for calculation of mutual positions within a group of participants with a view to facilitating the settlement of their mutual obligations on a net basis.

Clearing System: A depository/transaction system established to expedite the clearing of securities by removing the necessity for physical delivery. The two centralized Eurobond clearing systems are CEDEL and Euro-clear. Transactions and deliveries between accounts within the system are effected by way of book-keeping entry only.

Closeout: If the buyer of a put or call finds that it is not advantageous to exercise the option, the buyer can let it expire worthless. If the option has some value at expiration, the buyer can exercise the option and give (put) to take (call) delivery of the underlying currency. If the option is an exchange-traded option and has increased in value, the buyer may prefer to take this profit by executing a liquidating closeout transaction, that is, the sale of an option with equal terms.

Closing: The procedures relating to the completion of a primary market issue on the closing date.

Closing Date: The date on which a new issue's proceeds are paid to the borrower by the lead-manager and the securities, in temporary or definitive form, are delivered to the lead-manager by the borrower. In the case of Eurosecurities, this usually occurs ten-15 days after the signing of the issue's subscription agreement.

Coffee, Sugar & Cocoa Exchange, Inc. (New York): Futures: cocoa, coffee, consumer price index-wages, sugar number 11, sugar number 14. Futures options: cocoa, coffee, sugar.

Co-Lead-Manager: A manager that participates in some of the functions of the lead-manager, usually takes a share of the premium but never runs-the-books of an issue.

Collar: The simultaneous purchase of a cap and the sale of a floor with the aim of maintaining interest rates within a defined range. The premium income from the sale of the floor reduces or offsets the cost of buying the cap.

Collateralized Mortgage Obligation (CMO): Mortgage-backed bond that separates mortgage pools into different maturity classes, called tranches. Income from payments (principal and interest) on the mortgage is paid to CMO investors in the specific order that the CMOs pay out. Tranches pay different rates of interest and typically mature in 2, 5, 10 or 20 years.

Co-Manager: A manager that does not run-the-books.

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Commercial Paper (CP): Any short-term note or draft of a governmental agency, bank or corporation, issued on a discount or occasionally on an interest bearing basis at the request of the purchaser; usually an unsecured promissory note issued for short-term credit needs. The proceeds of CP are normally used for current transactions. This instrument is primarily issued in the U.S. domestic market (the maturity of U.S. commercial paper is statutorily limited to 270 days), but issues of commercial paper, on an interest bearing or a discount basis, have been completed in the Eurodollar market, and are referred to as Eurocommercial paper.

Commodity Exchange, Inc. (COMEX) (New York): Futures: aluminum, copper, gold, silver. Futures options: copper, gold, silver.

Commodity Options: A contract providing the purchaser the right, but not the obligation, to buy or sell a given quantity of a commodity at a strike price, on or before a given date.

Commodity Swaps: A transaction that allows an investor to exchange payment streams which are based on commodity prices. Commodity swaps involve swaps of payment streams only and are usually settled in cash. However, physical delivery may also occur. Commodity swaps enable producers and consumers to hedge commodity price risk. Usually, the consumer pays fixed, the producer floating.

Common Stock (Shares or Equity): A share usually represented by a certificate, representing participation in the ownership of an enterprise, generally with the right to participate in dividends and to vote in major matters affecting shareholder's interest.

Competitive Bids: A type of firm commitment underwriting whereby different prospective underwriters for a securities issue submit sealed bids, containing price and terms, to the issuer. The issuer awards the underwriting contract to the bidder with the best price and terms. Contrast with negotiation.

Concession or Commission: A concession is a discount available as a percentage of a fixed amount on either a flat or an annual basis, whereas a commission is a fee paid as a percentage of a fixed amount on either a flat or an annual basis.

Confirmation Note or Contract Note: A formal contract confirming and detailing all data relevant to a trade in the secondary market.

Conversion Premium or Discount: The ratio of the market value of a convertible security to its conversion value, expressed as a percentage. When the market value of the security is higher that the conversion value, this ratio is said to be a premium and, when lower, a discount. Note: Account should be taken of the accrued interest on the convertible bond because this is given up on conversion into the equity.

Conversion Price: The price which is specified when the final terms of a new issue convertible securities are fixed, and at which price the principal or nominal value of those securities is convertible into the underlying shares.

Conversion Value: The conversion ratio multiplied by the current price of the underlying security.

Convertible: A security, usually a bond or preferred stock which, at the option of the holder, can be exchanged for other securities of the issuing corporation, usually its common stock. For legal and/or fiscal reasons, convertibles are often issued by one corporation and may be denominated in either the same or a different currency from that of the common stock.

Convexity: Acceleration of price change with respect to yield changes; measure of the curvature of the

price/yield curve.

Coupon: *Generally, the nominal annual rate of interest expressed as a percentage of the principal value, which is the interest the borrower promises to pay the holder of a fixed income security. The coupon is payable annually, semi-annually, or, in some cases, quarterly, depending on the type of security. A straight debt bond is often referred to as a "coupon bond." Specifically, a certificate attached to a bearer security, which evidences the interest due on a specified date. It must be detached and presented to a paying agent to claim payment of such interest.*

Covered Option: *A written option position for which the writer also has an opposite market position in the underlying security,currency, or commodity.*

Credit Equivalent Value: *Term used in the Basle Capital Accord to represent the credit risk exposure in off-balance sheet transactions. In the case of derivatives, credit equivalent value represents the potential cost at current market prices of replacing the contract's cash flows in the case of default by the counterparty.*

Credit Risk: *The risk that is an issuer of debt securities, borrower, or trade debtor may default on their obligations or that there may be a potential loss in market value due to an adverse change in the market-required credit spread for an obligor.*

Cross-Currency Interest Rate Swaps: *A transaction involving the exchange of streams of interest rate payments (but not necessarily principal payments) in different currencies and often on different interest bases (e.g. fixed Deutsche Mark against floating dollar, but also fixed Deutsche Mark against fixed dollar).*

Cross-Currency Settlement Risk (Or Herstatt Risk): *Risk relating to the settlement of foreign exchange contracts that arises when one of the counterparties to a contract pays out one currency prior to receiving payment of the other. Herstatt risk arises because the hours of operation of domestic interbank fund transfer systems often do not overlap due to time zone differences. In the interval between final settlement of each leg, counterparties are exposed to credit risk and market risk.*

Cross-Currency Swap: *A currency swap in which neither leg is denominated in U.S.*

Cross Default: *A covenant by a borrower in respect of itself and its subsidiaries, if any, and by its guarantor, if any, whereby each party undertakes that, in the event of a default in a payment under its other borrowings, and/or by its subsidiary companies, such an event will be considered to be an event of default in respect of the issue to which the cross default covenant applies.*

Cross Product Agreements: *Master agreements between counterparties covering more than one type of derivative instrument.*

Cumulative Gap: *Same as Net Gap, but incorporating the positive or negative balance from preceding periods.*

Currency Swaps: *A transaction involving the exchange of cash flows and principal in one currency for those in another with an agreement to reverse the principal swap at a future date. In a currency swap, each participant (referred to as a counterparty) trades a fixed amount of one currency for a fixed amount of a different currency. The swap transaction can be compared to a pair of foreign exchange contracts, one spot and one forward. A swap agreement incorporates these cash flows into one transaction. The counterparties agree to an initial exchange of currencies at the prevailing spot exchange rates. Simultaneously, the parties agree to return the respective currencies to the original holders on a specified*

future date at the original rate of exchange. The return of currencies can also be structured to take place over a series of repayment dates (annual, semi-annual, etc.), rather than in one lump sum at maturity. The cash flows in currency swaps are similar to principal and interest payments in each currency. Typically, each counterparty borrows at a fixed rate in its initial currency. Alternatively, the currency could be generated in the normal course of business. In either case, each party exchanges a currency in which it has a temporary surplus for the equivalent amount of another currency that it needs or that it can invest more profitability. Over the term of the swap, the parties also exchange amounts representing interest payments on the currencies initially exchanged. The payments received can be used to service the interest payments due on each party's original borrowing. The difference in the values of these periodic payments compensates for the differential in interest rates in the two countries whose currencies were swapped. Thus, the swap mechanism enables a borrower of one currency to lock in a source of fixed rate funding in another currency.

Current Coupon: *In fixed rate securities, a coupon which approximates current yield levels for similar securities. Straight debt securities with current coupons have prices close to par; and in floating rate securities, the rate of interest on the current interest period.*

Currency Translation Risk: *The risk that a loss will be incurred due to fluctuations between the base currency and other currencies when assets and liabilities are translated into the base currency for accounting purposes.*

Current Exposure Method: *Term used in the Basle capital accord to denote a method of assessing credit risk in off-balance sheet transactions, consisting of adding the market-to-market replacement cost of all contracts with positive value and an add-on amount for potential credit exposure arising from future price or volatility changes.*

Current Yield: *The ratio of a coupon on a security to its market price, expressed as a percentage.*

Cushion Bond: *A high coupon bond selling at a price above its call or optional redemption price.*

Custodian: *An institution holding securities in safekeeping for a client.*

Dealer: *Enter into transactions with customers and other market participants, seeking to profit by maintaining a generally balanced portfolio from which they expect to earn a bid/offer spread.*

Dealer Market: *Market characterized by the existence of market participants who are always willing to buy and sell.*

Debt Ratio: *A measure of a corporation's reliance on long-term debt as a source of capital and its flexibility vis a vis future financings.*

Debt Service: *Payments of interest and principal on total borrowings which must be made by the borrower in the period during which its debt is outstanding.*

Default: *A failure to fulfil the conditions of a contract; for example, a failure to make timely payment of interest or principal on an issue of securities.*

Deferral Accounting: *The postponement of hedge instrument gains or losses to coincide with the maturities or repricing dates of the underlying asset or liability.*

Delivery Risk: The risk, on a payment date when each party has an obligation to make a payment, that one party will make its required payment but the other will fail to pay.

Delta: The rate of change of an option's price with respect to the price of the underlying asset. The ratio of these two futures is called the delta. An option whose price changes by $1 for every $2 change in the price of the underlying has a delta of .5. Movement in the delta factor can vary between 0 (as the option moves further out-of-the-money) and 1.0 (as the option moves further in-the-money). The delta can also be viewed as the first derivative of an option's price, reflecting what the amount of the hedge in the underlying instrument should be.

Delta Neutral: A position established when the writer of options creates a combined position in options and underlying instruments that will be unaffected by small changes in the prices of the underlying instruments.

Derivative: A contract whose value depends on, or "derives" from, the value of an underlying instrument. Such underlying instruments include interest rates, currency exchange rates, commodity prices, equity (stock) prices, and other indices. Its primary purpose is to transfer price risks associated with fluctuations in asset values rather than to borrow and lend funds. However, derivative financial products are often analyzed like traditional financial products: by the structure of cash flows and the underlying index or asset value.

Discount: The difference between par and the price of an issue, for issues selling below par.

Discount Basis: A method for quoting the annualized return on non-interest bearing securities, which always sell at a discount, in which the amount of the discount from par represents the investor's income during the life of the securities.

Discount House: A U.K. institution acting as intermediary between the Bank of England and the banking system. It enjoys last resort facilities at the Bank of England and participates in underwriting the weekly 91 day U.K. Treasury Bill auction.

Discount Swaps: Also called off-market swaps, in which the fixed payments are below market rates. At the end of the swap, the shortfall is made up by one large payment. The credit risk taken on by the fixed rate recipient (usually the bank) increases with the discount applied to interest rates.

Documentation Risk: Risks arising from poor or missing documentation include but are not limited to unenforceable contracts, deals not entered on a timely basis (if at all) and deals entered incorrectly. The preceding could lead to profitable contracts being dishonored, improper hedges effected, trades exceeding their limits, or undue exposure to a single counterparty. These risks are of particular concern with swap and forward transactions because they are negotiated and executed over the telephone, and there are no standards procedures for settling the transactions, such as major clearing center.

Double Taxation Agreement: An agreement between two countries intended to avoid double taxation of income, under the terms of which an investor with tax liabilities in both countries can either apply for a reduction of taxes imposed by one country, or can credit taxes paid in that country against tax liabilities in the other.

Drop-Lock: A hybrid security which is issued as a floating rate instrument but which becomes a fixed rate bond when its index rate falls below a predetermined trigger rate.

Due Date: The date on which payment of interest or principal becomes due and payable.

Due Diligence: This is a legal term used to refer to the efforts necessary to ensure adequate representations and disclosures of all material information.

Due Diligence Review: An underwriter is exposed to the potential liability under securities laws for selling securities on the basis of erroneous or incomplete information, and is protected against this liability if it meets an appropriate standard of "due diligence" in verifying the information in the prospectus. The review consists of a reasonable investigation of information performed in two parts, business and legal. The business part covers items such as the issuer's operations, management, research and development plans and stock buy back plans. The legal part covers potential legal liability claims against the issuer and documentary records of its business, mainly board of directors' minutes.

Duration: A measure of security's maturity which takes into account the periodic coupon payments. Or specifically, the weighted average maturity of all the payments of a security, coupons and principal, where the weights are the discounted present values of the payments. As such the duration is shorter than the stated term to maturity on all securities except for zero coupon bonds.

Early Exercise: The exercise of an option prior to its expiration date. Applies only to American options.

Earning Risk: Risk of loss to profitability resulting from future occurrences.

ECP: Eurocommercial Paper.

ECU: European Currency Unit.

EMS: European Monetary System.

Effective Date: First day of the term of the Rate Swap Transaction. Also known as Start Date or Commencement Date.

Embedded Options: An option (either tied to an interest rate index, to an equity price or an equity index) embedded in a debt instrument that affects the instrument's redemption. Examples include callable bonds and mortgage backed securities.

End-User (swap market): In contrast to a swap-trading institution, a counterparty which engages in a swap to change its interest rate or currency exposure. End-users may be nonfinancial corporations, financial institutions or governments.

Equity Options: Encompass a class of options giving the purchaser the right, but not the obligation, to buy or sell an individual share, a basket or shares, or an equity index at a predetermined price, on or before a fixed date.

Equity Securities: Principally stock or other traded ownership interests.

Equity Swaps: A transaction that allows an investor to exchange the rate of return (or component there of) on an equity investment (an individual share, a basket or index) for the rate of return on another non-equity or equity investment.

Eurobonds: Medium-to-long term debt securities issued by borrowers outside their home markets. Eurobonds are issued in a number of currencies, but roughly 70-75% are denominated in U.S. dollar.

Eurocommercial Paper (ECP): Short-term notes issued by borrowers outside their home markets, without

the backing of a syndicate of underwriting banks. The issuers may acquire backup liquidity in the form of a bank line of credit to support their note issues. However, in Eurocommercial paper programs, backup agreements are separate from the placing arrangements rather than being part of a committed underwriting facility. Maturities of Eurocommercial paper can be tailored to suit the investor's preference and, in some cases, paper is made available continuously, with bid and offer prices quoted daily for all maturities.

Eurocurrency: *Funds which are held in an account outside the country in whose currency they are denominated.*

Eurodollar Convention: *ISDA convention for determining exact payment or period end dates.*

Euroissue: *A term referring to any public offering or private placement of Eurosecurities. Such issues are typically placed with investors in more than one country by an international syndicate.*

Euromarket: *A general term for the international capital markets which encompasses, inter alia, the market for Eurobonds, Euro FRNs, Euro CDs/FRCDs/ECP, Euro inter-bank deposits, Euro foreign exchange and Euro syndicated credits. All transactions in the Euromarket are denominated in Eurocurrencies.*

Euronotes: *Short-term debt securities issued by borrowers outside their home markets. To date, most Euronotes have been issued under medium-term underwriting commitments extended by commercial banks. These commitments generally involve an agreement on the part of the banks, for the term of the facility, either to purchase any notes which the issuer fails to sell or to provide credit to the note issuer at a specified markup over market rates for any unsold portion of the notes.*

European Currency Unit (ECU): *A composite currency, the value of which is determined on the basis of a basket of European currencies. It was designed as a unit of account for the EMS and it also functions as the common denominator of the EUA.*

European Monetary System (EMS): *The group of European countries, (Belgium, Luxembourg, Denmark, Germany, France, Italy,Ireland and the Netherlands) which agreed in March, 1979, to keep their respective currencies within certain defined upper and lower limits in relation to each other. According to the original agreement, when one of these currencies is devalued, a realignment within the EMS will take place, and all rates will be correspondingly adjusted.*

European Option: *An option which may be exercised only on its expiration date.*

Eurosecurity: *Any security issued in the Euromarket.*

Event of Default: *A default upon the occurrence of which either an investor or the trustee is entitled to call in the outstanding amount of the related issue for immediate redemption. A borrower's failure to comply with any of a set of conditions specified in the terms of its issue of securities is called an event of default, and may include non-payment, non-compliance with a covenant, such as a negative pledge, a cross-default, insolvency and liquidation.*

Event Risk: *The risk that, due to some negative event such as a leveraged buyout, professional liability, or war, a company will be adversely affected, thus decreasing the value of its bonds and/or equity.*

Examination and Supervisory Guidance: *The universe of regulations, statements of policy, operating bulletins, and examination and procedural manuals.*

Exchange Traded: *Instruments with standardized contract terms traded in an established clearinghouse environment.*

Exercise: *The conversion of an option into its underlying commodity when the investor demands delivery.*

Exercise Price: *The fixed price at which an option holder has the right to buy, in the case of a call option, or to sell, in the case of a put option, the financial instrument covered by the option.*

Exercise Risk: *Occurs when a bank writes (sells) an option. It is the risk that the purchaser will choose to exercise the option to either buy (in the case of a call) or sell (in the case of a put) a security at a specified price. Such options are exercised only if the option is "in the money," that is, if the holder can realize a gain by exercising the option. If an option has not been exercised by its expiration date it becomes worthless. The seller will not have been asked to perform its side of the agreement and will have profited from the sale by the full extent of the option premium.*

Expiration Date: *The last day that an option can be exercised or traded.*

Extendible Maturity: *A security's maturity in respect of which an investor has an option, exercisable on a specified date or dates, to extend its final maturity to a date specified in the terms of the security.*

FDICIA: *The Federal Deposit Insurance Corporation Improvement Act of 1991.*

FIRREA: *Financial Institutions Reform, Recovery and Enforcement Act of 1989.*

Fair Value of an Option: *A term used to describe the worth of an option contract as determined by a mathematical model. It is the price at which an option contract should be trading in a liquid market.*

Federal Funds: *Deposit balances at the U.S. Federal Reserve Bank, most of which represents legal reserves of member bank, and U.S. Dollar, i.e. cash.*

Federal Funds Rate: *The interest rate at which Federal Funds are traded and which is monitored by the U.S. Federal Reserve Bank in the process of regulating the growth of bank reserves and money supply. As such, it is watched by market participants.*

Financial Futures: *Standardized contracts traded on organized exchanges to purchase or sell a money market instrument, a specific fixed income security or class of securities, including a foreign currency, on a future date at a specified price. It also includes billion and indices based on securities.*

Firewalls: *A series of prudential limitations that operate by addressing practices, transactions or relationships that have the potential for conflicts of interest, unsound banking practices, unfair competition or other possible adverse effects upon affiliated banks. The basic approach of these limitations is to require ineligible securities activities to be conducted in a separate strongly capitalized holding company subsidiary.*

Fiscal Agent: *A bank appointed by the borrower as its agent for a new issue of securities when no Trustee has been appointed. Its functions include those of a principal paying agent and a number of the clerical functions, but none of the fiduciary responsibilities of a Trustee.*

Fixed Rate Interest: *Interest on a security which is calculated as a constant specified percentage of the principal amount and paid at the end of specified interest periods, usually annually or semi-annually until maturity.*

Fixed Rate Payer: *A party obligated to make payments from time to time during the term of the Rate Swap Transaction of amounts calculated by reference to a fixed per annum amount.*

Fixed Rate Provider: *The party which pays the floating rate and receives the fixed rate.*

Fixed Rate Taker: *The party which pays the fixed rate.*

Fixing: *The interest rate on a floating rate security or loan is usually determined two business days prior to the beginning of each interest period.*

Flat: *A price quoted inclusive of accrued interest; and a commission or fee which is calculated as a percentage of the principal value of an issue of securities, and which is payable once (usually at issue), as opposed to a percentage fee payable on a per annum basis each year.*

Floating (Variable) Rate Interest: *Interest on an instrument or issue of securities, which is not fixed for the life of the instrument/issue, but which is periodically determined by an agent bank according to a formula specified in the terms of the contract. The rate is usually set at a margin above a specified money market rate. For example, for Eurodollar securities, it is typically the three or six month interbank rate at which leading banks offer Eurodollar deposits to each other.*

Floating Rate Note (FRN): *Medium-term securities carrying floating rates of interest that are reset at regular intervals, typically quarterly or semi-annually, based upon some predetermined reference rate, usually LIBOR.*

Floating Rate Payer: *A party obligated to make payments from time to time during the Term of the Rate Swap Transaction of amounts calculated by reference to a floating per annum rate.*

Floating Rate Taker: *The party which makes payments based on a floating rate. Also called the Fixed Rate Provider.*

Floor: *A contract whereby the seller agrees to pay to the purchaser, in return for the payment of a premium, the difference between current interest rates and an agreed (strike) rate times the notional amount should interest rates fall below the agreed rate. A floor contract is effectively a string of interest rate guarantees.*

Flow of Funds Analysis: *In macro economic analysis, the study of the sources and uses of funds for the major economic sectors of an economy.*

Foreign Bond: *A security issued by a borrower in a domestic capital market other than his own and denominated in the currency of that market.*

Foreign Currency Translation: *The process of expressing in the reporting currency of the institution those amounts that are denominated or measured in a different currency.*

Foreign Exchange Contracts: *A agreement between two parties to exchange one currency for another at an agreed upon exchange rate.*

Forward: *For delayed settlement on a mutually agreed date.*

Forward American Option: *Option giving the holder the right to exercise a put or a call at a time in the future of sometime thereafter during the life of the option.*

Forward Contracts: Over-the-counter contracts for forward placement or delayed delivery of securities in which one party agrees to purchase and another to sell a specified security at a specified price for future delivery. Contracts specifying settlement in excess of 30 days following trade date are deemed to be forward contracts. Forward contracts are not traded on organized exchanges and can only be terminated by agreement of both parties to the transaction.

Forward (or Future) Rate Agreement (FRA): Agreement between two parties wishing to protect themselves against future movements in interest rates. The agreement states a specific interest rate to be paid on a notional deposit of specified maturity at a specific future time (the settlement date). As a result, these agreements share characteristics of both interest rate futures and interest rate swaps. They essentially serve the purpose of a futures contract, and are settled on a net basis, but provide the flexibility of a swap. FRAs are not traded on exchanges and are not subject to margin calls. They can be based on virtually any agreed-upon index, can involve any amount, cover any period of time or any currency, and do not require the exchange of principal. As a result, they can be structured to the specific needs of both parties. Similar to financial futures, FRA provide an off-balance sheet method of managing interest rate risk.

Functional Currency: The currency of the primary economic environment in which an entity operates.

Funding: The obtaining of capital, debt and deposits.

Futures Contract: An exchange-traded contract generally calling for delivery of a specified amount of a particular grade of commodity or financial instrument at a fixed date in the future. Contracts are highly standardized and traders need only agree on the price and number of contracts traded. Traders' positions are maintained at the exchange's clearinghouse, which becomes a counterparty to each trader once the trade has been cleared at the end of each day's trading session. Members' positions are marked-to-market daily at the clearinghouse and members must post margin. Most trades are unwound before delivery. The interposition of the clearinghouse facilitates the unwinding since a trader need not find his original counterparty but may arrange an offsetting position with any trader on the exchange.

Futures Value: The expected value of a specified future date of a payment or a series of payments which are invested at a specified rate until such future date.

GAAP: Generally Accepted Accounting Principles.

Gamma: When applied to bonds, a measure of convexity; the rate of change of the portfolio's delta with respect to the price of the underlying asset.

General Obligation Bonds: Bonds issued by governments where payments to investors are dependent on the taxing authority of the government.

Gensaki: A Yen denominated security's repurchase agreement.

Gilts or Gilt-Edged: Domestic Pound Sterling denominated securities backed by the full faith and credit of the United Kingdom and issued by the U.K. Treasury.

Global Bond: A temporary certificate, representing a whole issue, created to control the primary market distribution of an asset of securities in compliance with certain legal restrictions, or because definitive bond certificates are not immediately available.

Grey Market: The Eurobond market in which issues are traded, from the date of an issue's launch until the date of the issuer's allotment, i.e. during the primary market syndication on an "if", "as" and "when-

issued" basis.

Gross Payments: *Means that each party will make full payment to the counterparty on the payment date.*

Gross Underwriting Spread: *The difference between the price paid by the public to an underwriter for securities and the amount paid by the underwriter to the issuer, which the underwriter expects will yield a profit to the underwriter.*

Group of Thirty: *International panel of industry, legal, and academic representatives, supported by the major institutional participants in the global financial markets.*

Haircut: *A specific formula used in the valuation of securities for the purpose of valuing a broker-dealer's net capital. The haircut varies according to the class of security, its market risk and its time to maturity.*

Hedge: *To take a position which offsets the existing or anticipated exposure to market price movement. A perfect hedge will eliminate the possibility of future gain or loss.*

Hedge Funds: *Speculative funds managing investments for private investors (in the U.S., such funds are unregulated if the number of investors does not exceed one hundred).*

Hedge-Warehouse: *Currency swap book in which swaps are written without necessarily entering into an offsetting swap positions.*

Hedging: *A financial technique used to offset investment risk such as risk of loss from price fluctuations in the market.*

Historical Loss Rates: *Determined from data accumulated over a given time frame.*

Historical Rate Rollovers: *In the foreign exchange market, off-market rates may take the form of historical rate rollovers. In a typical rollover, the financial institution will be asked by the customer to apply the historical rate of a maturing contract to the spot end of a new pair of contracts which, in effect, extends the maturing contract, thereby deferring any gains or losses. Historical rate rollovers virtually always involve the extension of credit by one party to the other. While accounting conventions do not require that these amount be recognized in the books as loans or borrowings, proper risk control requires that they be treated as such.*

Holdover Trades: *Trades which were transacted but not yet posted to the ledgers. Such trades should be included, however, in position and risk management reports and should be posted immediately on the following day.*

Hypothecate: *To pledge, mortgage or otherwise place a charge or lien upon an asset. While all these terms represent a security interest, they have highly technical meanings in English law usage. Other legal systems use the terms in different senses and the interpretation thus depends on the relevant legal system.*

Immediately Available Funds: *Funds with immediate good value, e.g. federal funds and cash.*

Index: *A numerical figure or statistical measure adjusted periodically to reflect changes in the quantity of goods produced, prices paid or loan interest rates, by comparing current activity to a base year or other specified time frame.*

Ineligible Securities: *Certain debt and equity securities that cannot be underwritten or dealt in by banks directly.*

Inflation: *The loss of purchasing power of money over time.*

Instrument: *A global term for securities, encompassing a range of financial debt from negotiable deposits to bonds. Typically used in relation to short maturities, such as money market instruments.*

Insured Financial Institutions: *For the purposes of this document, commercial banks, savings banks, savings and loans, and certain trust companies, thrift companies and industrial loan companies that have federal deposit insurance coverage.*

Interbank Rates: *The rates at which banks bid for and offer deposits to each other.*

Interest Rate Cap: *An option-like feature for which the buyer pays a fee or premium to obtain protection against a rise in particular interest rate above a certain level. If the covered interest rate rises above the rate ceiling, the seller of the cap pays a purchaser an amount of money initially agree upon.*

Interest Rate Contracts: *For purposes of this document, include interest rate swaps, caps, options, floors, futures, forwards and forward rate agreements.*

Internal Rate Gap: *The exposure to change in interest rates at a particular maturity.*

Interest Rate Risk (IRR): *One type of market risk that concerns the sensitivity of a bank's financial performance to changes in interest rates. The primary determinant of the interest rate risk position in a bank is the extent of mismatched rates and maturities for a bank's assets and liabilities. Both on and off-balance-sheet instruments can carry this risk.*

Interest Rate Swap: *An interest rate or coupon swap is a contractual agreement to exchange one interest rate payment for another. Generally, one of the payments is based on a fixed rate of interest while the other is based on a floating rate. In a typical interest rate swap, two parties borrow identical principal amounts (referred to as the notional principal) in the same currency for the same period from different lenders. One borrower pays a floating-rate of interest, while the other pays a fixed rate. Simultaneously, the two borrowers execute a swap agreement. Each party agrees to make payments to the other based on the other party's cost of borrowing. That is, the borrower with the fixed-rate loan agrees to make floating-rate payments in return for receiving fixed rate payments which it uses to service its fixed rate debt. Likewise, the participant with floating-rate debt makes the fixed rate payments, but receives floating-rate payments needed to service its floating rate debt.*

Intermediary (swap market): *A counterparty who enters into a swap in order to earn fees or trading profits. Most intermediaries, or swap dealers, are major U.S. money-center banks, major U.S. and U.K. investment and merchant banks, and major Japanese securities companies.*

Internal Rate of Return: *The interest rate which equates the present value of a future stream of payments with the initial investment, i.e. the yield-to-maturity.*

International Monetary Market at Chicago Mercantile Exchange (Chicago): *Futures: bank certificates of deposit, British pound, Canadian dollar, Deutsche mark, Eurodollar, European Currency Unit, French franc, gold, Japanese yen, Swiss franc, U.S. Treasury bills.*

In-the-Money Option: This term refers to the situation when the strike price of a call is lower than the market, or when the strike price of a put is higher than the market.

Intraday Credit (or Daylight Credit): Credit extended for a period less than one business day; in a credit transfer system with end-of-day final settlement, daylight credit is tacitly extended by the receiving institution if it accepts and acts on a payment order even though it will not receive final funds until the end of the business day.

Intrinsic Value of an Option: The amount by which the price of the underlying currency exceeds a call option's strike price, or by which a put option's strike price exceeds the price of the underlying currency. It is the amount that the owner of the option would receive if the option were exercised at the current market price. An option that has intrinsic value is said to be in-the-money.

Inverted Yield Curve: Yields on the short-term securities are higher than those on the long-term securities of the same quality.

Invitation Telex: A telex to prospective syndicate members from the lead-manager describing a primary market issue and its expected terms and inviting them to participate in the underwriting and/or distribution of the issue.

ISDA: International Swaps and Derivatives Association.

Issue Date: The date of an issue of securities from which interest accrues. Issue date is often incorrectly used as the date on which allotments are made for new issues of Eurosecurities. In fact, the issue date is the same as the payment date.

Issue Price: The percentage of principal value at which the price of a new issue of securities is fixed. The price may be fixed either at par, at a discount from par, or at a premium over par.

Joint and Several: In the context of a guarantee for which there is more than one guarantor, this term refers to each guarantor's liability to cover his own failure and the failure of any other guarantor(s) to fulfil their obligation.

Junk Bond: A bond given a rating lower than investment grade by a recognized credit rating firm, such as Moody's or Standard & Poor's. Investment grades are the highest grades given to bonds perceived to involve the least amount of investment risk.

Kansas City Board of Trade (Kansas City): Futures: Value Line Maxi Index, Value Line Mini Index, wheat. Futures options: wheat.

Kappa (RHO): A measure of the impact of a change in volatility on the value of a cap or floor.

Lead Manager: Has primary underwriting responsibility among syndicate members, and performs the following: maintains primary interface with the issuer; chooses syndicate members and sets underwriting liabilities; prices the issue (with input from co-managers); runs the books (i.e. determines how many shares each firm gets to sell and keeps track of interest in the issue and actual amounts sold); commits the most capital; has option of keeping the largest amount of securities to sell; performs administrative and organizational duties for the syndicate; serves as market maker for the issue; and stabilizes the issue.

Legal Risk: The possibility of a change in laws and/or banking regulations, or their interpretation, that invalidate existing contractual agreements or otherwise impede the efficient conduct of banking business.

Examples include: increasing capital requirements for off-balance-sheet activities; invalidation of netting agreements under bankruptcy laws; invalidation of swaps agreements with governmental organizations; and new restrictions on bank activities.

Leverage: *The debt to equity position of a company.*

Liability Swap: *A Swap that transforms the cash flows (interest expense) from an underlying borrowing.*

Life: *This period between a security's issue date and its final maturity.*

Life-to-Call: *The period remaining before a borrower's first option to call or redeem a security.*

Limits: *Maximum risk levels defined for each portfolio by senior management.*

Liquidity: *Characteristic of a security or commodity with enough units outstanding to allow large transactions without a substantial decrease in price.*

Liquidity Ratios: *Ratios which reflect a borrower's ability to meet its short-term obligations.*

Liquidity Risk: *The risk that a commodity or security can not be bought or sold quickly enough or in sufficient quantities at a reasonable price. The higher the uncertainty associated with the timing and amount of cash flows of a transaction, the higher the liquidity risk.*

Listing: *The acceptance of an issue of securities for trading on a stock exchange. Prices on such stock exchange are available to the public.*

Lock-up Period: *The period between an issue's closing date and the issue of definitive certificates, during which a global bond usually represents the issue.*

LOCOM: *Lower of cost or market value. An accounting method used for specified securities and trading instruments.*

London Interbank Bid Rate (LIBID): *The rate at which prime banks offer to make Eurodollar deposits from other prime banks for a given maturity.*

London Interbank Offered Rate (LIBOR): *The rate at which prime banks offer to make Eurodollar deposits with other prime banks for a given maturity (and sometimes a given amount as well), which can range from overnight to five years.*

Long Date Foreign Exchange Deal: *Foreign exchange deals with a maturity of greater than 372 days.*

Long Position: *Ownership of a security, giving the investor the right to transfer ownership to someone else; the right to receive income paid by the security; and the right to profits or losses as the value of the security changes.*

Long-Term: *In the Eurobond market, refers to initial maturities longer than seven years; and under standard accounting practice, refers to long-term debt with a remaining maturity greater than one year*

Macaulay Duration: *Elasticity of price change with respect to yield change % Price Change % Yield Change.*

Management Group: *The primary underwriters of a new issue comprising the managers.*

Mandatory Redemption: *A feature of an issue prior to its maturity, either by open market purchases at any price, or by drawing by lot for payment at par, through the operation of a sinking fund.*

Margin: *Funds or collateral posted as a good-faith performance guarantee. Futures and options exchange often require traders to post initial margin when they enter into new contracts. Margin accounts are debited or credited to reflect changes in the current market prices on the positions held. Members must replenish the margin account if margin falls below a minimum. In similar fashion, customers must post margin on positions held for them at the exchange clearinghouse by member firms.*

Market Liquidity: *Measured by participants as the extent to which their own actions (transactions) change the market price of an asset. A market is said to be liquid if the immediate reversal of a transaction does not involve losses (other than fixed transaction costs).*

Market Liquidity Risk: *One type of market risk that concerns the uncertainty associated with the market liquidity of a financial asset. Often considered as the risk that a (negotiable or assignable) financial instrument cannot be sold quickly and at a price close to its fundamental value.*

Market Risk: *The combination of risks resulting in changes from market conditions. In the broadest definition this includes price risk, yield curve risk, basis risk, the range of options risk and liquidity risk.*

Marking-to-Market: *The process of recalculating the exposure in a trading position or a portfolio (of securities, equities or derivatives) on the basis of current market prices.*

Master Agreement: *An agreement that incorporates the entire range of derivative (usually swap) transactions between two counterparties into one legal agreement.*

Maturity (Final Maturity): *The end date of a security, i.e. the date on which the principal or nominal value becomes due and payable in full to the holder. Note: maturity is a general term which can also take into account various borrower and/or lender options. See average life, put, call, retractable and extendible. Final maturity is a more specific terms which is used to signify a security's ultimate repayment date.*

MidAmerica Commodity Exchange (Chicago): *Futures: British pound, Canadian dollar, copper, corn, Deutsche mark, gold, Japanese yen, live cattle, live hogs, oats, platinum, silver, soybeans, soybean meal, Swiss franc, U.S. Treasury bills, U.S. Treasury bonds, wheat. Futures options: gold, soybean, wheat.*

Minimum Rate: *In the context of floating rate notes, that interest rate below which the coupon may not be fixed while the issue is outstanding.*

Minneapolis Grain Exchange (Minneapolis): *Futures: high fructose corn syrup, spring wheat, white wheat. Futures options: spring wheat.*

Mismatched Payment Swap: *A transaction in which the parties are required to make payments at different intervals (e.g. the fixed rate payer makes its payments annually but the floating rate payer makes payments semiannually).*

Money Center Banks: *Large, multinational U.S. banks historically headquartered in New York, Chicago, and San Francisco.*

Money Market: *The market for interbank funds, CDs and FRCDs. The term also refers to the market for new issues of securities due in less than one year, such as CP and ECP and more generally, if not quite correctly, to FRNs.*

Money Market Basis: *Calculated on a basis of actual/360 or 365/360 basis, with each period running from (and including) the commencement date of that period to (but excluding the last day of the period. Money market basis quote = Bond basis quote 360/365.*

Multilateral Netting: *Netting arrangements involving more than two counterparties.*
NASDAQ 100 index.

Multi-Refix Coupon: *A coupon which reprices more than once within each coupon period.*

National Association of Securities Dealers Quotation System (NASDAQ): *Index Option:*
Pacific Stock Exchange (San Francisco): *Index Options: Technology Index.*

Negotiation: *A type of firm commitment underwriting whereby the issuer chooses the underwriter without competitive bidding and the gross underwriting spread between the purchase price paid to the issuer by the underwriter and the public offering price is determined through negotiation between the issuer and the underwriter (or lead manager representing the syndicate).*

Netting (or Netting Schemes): *An agreed offsetting of positions or obligations by trading partners or participants in a system. The netting reduces a larger number of individual positions or obligations to a smaller number of positions. Netting may take several forms which have varying degrees of legal enforceability in the event of default of one of the parties.*

New York Cotton Exchange (New York): *Futures: cotton, orange juice, propane. Futures options: cotton, orange juice. FINEX (a division of the Cotton Exchange), European Currency Unit futures, U.S. dollar futures, U.S. dollar futures options.*

New York Futures Exchange (division of the New York Stock Exchange) (New York): *Futures: Commodity Research Bureau Futures Price Index, New York Stock Exchange Composite Index. Futures options: New York Stock Exchange Composite Index.*

New York Mercantile Exchange (New York): *Futures: crude oil, gasoline (leaded and unleaded), no. 2 heating oil, palladium, platinum, potatoes. Futures options: crude oil.*

New York Stock Exchange (New York): *Index Options: New York Stock Exchange Beta Index, New York Stock Exchange Options Index.*

Nominal Amount or Value: *The value stated on the face of a security.*

Nominative: *Nominee: A person or entity holding a security in his own name for the benefit of the actual or beneficial owner, usually to ensure anonymity.*

Non-Callable: *An exemption of an issue for a stated time period from any kind of redemption at the option of the borrower. This period may be part of the life of an issue or its entire life.*

Note: *1) A promise to pay, as distinguished from an order to pay. A written promise of a borrower to pay a certain sum of money, to a person named as payee, on demand or at a fixed or determinable future date. 2) A fixed rate debt instrument with a maturity of less than eight years; and 3) Any floating rate*

debt instrument other than an FRCD, regardless of maturity.

Notional Value (or Notional Principal): *The underlying face amount on which some index, price movement, interest rate or multiple, acts in order to determine the actual cash flows to be paid or received. Notional principal amounts calibrate the volume of future cash flows but do not represent the actual amount transferred. The notional amount is not exchanged or owed in most cases.*

Novation: *The satisfaction and discharge of existing contractual obligations by the substitution of new contractual obligations (whose effect, for example, is to replace gross with net payment obligations.)*

Odd-Lot: *Any block of securities bid or offered, which is smaller than the standard round lot size for that type of security. General over-the-counter market practice dictates that prices for odd-lots are discretionary.*

Off-Balance Sheet Activities: *Banks' business that does not generally involve the recording of assets or liabilities, but that are important features of banks' asset and liability management process. Examples include derivatives and the granting of stand-by commitments and letters of credit.*

Offering Date: *The day on which a new issue's allotments are made.*

Offset: *A transaction that results in canceling or reducing a claim. In general accounting terms, the transaction equals or counterbalances another transaction on the opposite side of the same ledger or the ledger of another account. In banking, the right of offset is the bank's legal right to seize deposit funds to cover a loan in default.*

Offshore: *In respect of taxation, any location where levels of taxation or regulations governing operations are sufficiently favorable to attract borrowers, and lender, of funds from major financial centers. Used to designate any location foreign to an investor's country of residence and/or nationality.*

OID: *Original Issue Discount Securities.*

Operating Risk: *The risk that the value of a company will decrease due to a breakdown in its operations such as back-office problems, errors or fraud.*

Optimization Trades: *Adjustments to portfolio hedges. Not matched to any particular swap deal, but aggregated into maturity banks for purposes of amortizing hedge gains and losses.*

Optional: *A borrower's option to retire or cancel the whole or part of an issue of its securities prior to its maturity, at prices at or above par.*

Options Contracts: *Contracts that grant the purchaser the right, but not the obligation, to either buy or sell an underlying security, money market instrument, foreign exchange, bullion, index based on securities, or financial futures contract. Certain options trade over-the-counter and specify delivery of the underlying instrument. Other options trade on securities exchanges and may specify either delivery of the underlying security or payment of net obligations based upon an agreed upon index of securities. Still other options, which specify delivery of futures contracts, trade on commodities exchanges. Call options enable the holder to buy the underlying financial instruments(s) at a specified price; put options allow the holder to sell the instrument at a specified price.*

Original Exposure Method: *A term used in the Basle capital accord to denote a method for assessing the credit risk in a derivatives portfolio, consisting of applying a standard set of conversion factors to the*

notional principal amounts of each instrument according to the nature of the instrument and its maturity.

Original Issue Discount Securities (OID): *Securities issued with coupons substantially below current market levels, thereby utilizing the OID to substitute for a portion of future current coupon income.*

OTC Market (Over-the-Counter Market): *Trading in financial instruments transacted off organized exchanges. Generally the parties must negotiate all details of the transactions, or agree to certain simplifying market conventions. In most cases, OTC market transactions are negotiated over the telephone. OTC trading includes transactions among market-makers and between market-makers and their customers. Firms mutually determine their trading partners on a bilateral basis.*

Out-of-the-Money: *An option whose strike price is higher than the current market for the underlying instrument or a put option whose strike price is lower than the current price.*

Overborrowed: *Position in which swap fixed coupons are to be paid.*

Overlent: *Position in which swap coupons are to be received.*

Over-the-Counter (OTC): Trading in financial instruments transacted off organized exchanges, and in which transactions are completed by principals over the telephone, telex or by computer. Generally the parties must negotiate all details of the transactions and therefore mutually determine their trading partners on a bilateral basis.

Par: Price; 100% of the principal value of a debt security. Value; that value assigned by a corporation to its common or preferred stock.

Pari Passu: Without partiality; used in the context of unsecured debt securities, which are said to rank "par passu" with each other, or with other unsecured debt, i.e. they rank equally with each other or with other debt in right or payment.

Parity: In foreign exchange terms, it refers to the predetermined limits within which any given currency may fluctuate against another currency.

Paying Agent: One bank or one of a group of banks responsible for the mechanical task of making due payments of principal and interest to a holder of a security against presentation of a security or its coupons.

Payment Date: That date in a primary issue on which syndicate members pay the lead-manager for their allotments of securities. An interest payment date and a settlement date in respect of secondary market transactions.

Payout Ratio: The percentage of an underwriting fee that is paid by the lead-manager to all the underwriters of a new issue, after adjustment for profits or losses, if any, on the stabilization of the issue in the secondary market and deduction for any costs incurred by the lead-manager in preparation of the issue, insofar as such costs are not reimbursed by the borrower.

Philadelphia Stock Exchange (Philadelphia): Foreign Currency Futures: Australian dollar, British pound, Canadian dollar, Deutsche mark, European Currency Unit, French franc, Japanese yen, Swiss franc. Foreign currency options: Australian dollar, British pound, Canadian dollar, Deutsche mark, European Currency Unit, French franc, Japanese yen, Swiss franc. Futures: National Over-The-Counter Index Futures (Philadelphia Board of Trade). Index options: Gold/Silver Index, National OTC Index, Value

Line Composite Index. Interest rate options: Eurodollar deposits, European Currency Unit.

Pip: *One 1/100 of one percent of the principal value of a security, e.g. $0.10 per $1000. It is used to express price differentials and it should not be confused with a basis point.*

Place: *Generally when a retail investor purchases new issues securities during the course of its primary market distribution; and when a professional intermediary purchases, at par or at a discount, "bought-deal" issue's securities during its primary market distribution.*

Plain Vanilla Swap: *U.S. Dollar swap indexed to six month LIBOR.*

Point: *One percent of the principal value of a security, e.g. $10 per $1000. Bond prices are quoted in points and fractions of points that should not be confused with basis points.*

Portfolio: *The securities owned by an investor are said to be held in the investor's portfolio.*

Post-closing Adjustments: *Entries which belong to general ledger accounts as of the end of the day, but get booked later, typically as a result of an accounting error or a receipt of funds late in the afternoon. (Note: These entries do not include "as of" adjustments, that is, entries to show receipt or payment of funds that should have occurred, but did not actually take place.)*

Preceding Day Convention: *If a coupon or maturity date falls on a weekend, holiday, or other non-business day, payment will be made on the business day preceding the scheduled payment date.*

Preferred Stock: *Share, evidencing ownership in a corporation, which pay a fixed percentage dividend but which do not give the holder voting privileges.*

Preliminary Prospectus: *A prospectus prepared by the lead-manager of an issue in conjunction with the borrower and distributed on the launch date. It contains all relevant details about the securities and the borrower, rate excludes the final terms. It is subject to revision.*

Premium: *The price paid for an option by an option buyer (holder) to an option seller (writer).*

Prepayment Risk: *The probability that the borrower or mortgage holder will pay the obligation before its scheduled maturity.*

Prescribed or Prescription Period: *The period of time, determined by the relevant governing law, which must elapse before the amounts due under a contract becomes no longer payable.*

Present Value: *The current worth of a future payment or a series of payments when discounted at a specified interest rate. Future value becomes present value through the process of discounting.*

Price Risk: *The risk that a security's price may fluctuate. Price volatility, a proxy of price risk, can be measured as the standard deviation of historical weighted weekly returns.*

Primary Credit Responsibility (PCR): *The banking unit with the credit responsibility for the client.*

Primary Federal Regulator: *For Nationally chartered banks the Office of the Comptroller of the Currency; for State Member Banks the Federal Reserve; for State Nonmember Banks the Federal Deposit Insurance Corporation and for Savings and Loans the Office of Thrift Supervision.*

Primary or Primary Market: The market in which new issues of securities are initially syndicated and distributed, i.e. sold or placed.

Prime Rate (as used in the U.S. Domestic Market): The rate of interest at which a commercial bank offers to lend money to its most creditworthy customers. The approximate average of prime rates quoted by the major U.S. bank on a given day.

Principal: A legal term used to designate one who appoints another person to act as his agent. One who acts for his own account as a dealer or market-marker in a transaction. The amount, inscribed on the face of a security, exclusive of interest or premium, due to a security holder at maturity and it is the amount used in the computation of interest due on such security.

Principal Exchange: The amounts exchanged at the beginning and end of a currency swap. These exchanges may be different in amount and in currency from the notional used to calculate the coupon during the swap. In a standard currency swap, the notional principal will equal the initial principal exchange.

Principal Paying Agent: The bank responsible for coordinating the operations of an issue's paying agent. Such an agent is usually only appointed when there is a trustee to the issue of securities.

Private Placement: An issue, for which the group of underwriting banks consists only of managers and the securities of which are generally each issued in denominations of $10,000 or more and which are generally sold to a limited number of institutional investors. Private placements are sometimes listed on a stock exchange either by the offering date or within several months there after.

Promissory Note or Letter: An unconditional promise in writing, signed by the debtor, to pay a specific sum on demand or at a fixed or determinable future date.

Prospectus or Offering Memorandum: A formal written offer to sell securities prepared by the lead-manager of an issue and must be filed with the Securities and Exchange Commission. It is made available to the appropriate legal authorities, stock exchanges, and prospective investors. A preliminary prospectus is generally despatched at the beginning of the subscription period and sets forth the plan for a proposed business enterprise or the facts concerning an existing one that an investor needs to make an informed decision. A final prospectus is despatched immediately after both the final terms have been fixed and the subscription agreement has been signed by the borrower and the managers.

Public Offering: An offering for sale of a new issue of securities to the general investing public. Securities of such an offering will generally be placed through a syndicate, will have securities issued in small denominations (e.g. $1,000 each) and will be listed on a stock exchange.

Purchase Agent: A bank designated by a borrower to use its best efforts to purchase bonds on the borrower's behalf to satisfy its purchase fund obligations.

Purchase Fund: A form of mandatory redemption whereby the borrower, either itself and/or via a purchase agent, agrees to use its best efforts to purchase, in the open market, specified amounts of an issue per annum in the event that the market price falls below a specified level, usually par.

Put: An option giving the buyer the right, but not the obligation, to sell a specific quantity of the underlying currency, instrument, or commodity at a set price, the exercise or strike price, on or before a fixed date in the future in exchange for a fee (the option premium).

Qualified Financial Contract: *Specifically defined in FIRREA to include any "securities contract, commodity contract, forward contract, swap agreement, and any similar agreement..."*

Quality: *The degree of credit risk of a security or borrower. High quality borrowers are perceived to have greater than average ability to make debt service payments and hence offer less risk.*

Quotation or Quote: *Bid and/or offered price or yield in a subject market, i.e. an indication of market levels, but not necessarily the price or yield at which a security can be bought or sold.*

Rally: *An expression used to indicate a rise in prices following a flat or declining trend.*

RAP: *Regulatory Accounting Principles.*

Rating: *The evaluation of an issue's investment quality, by a U.S. rating agency, such as* ***Moody's*** *or* ***Standard and Poor's.*** *An issue rating may change as the borrower's financial condition changes.*

Real Rate of Return: *That rate of return derived by subtracting the rate of inflation from the nominal rate of return.*

Redemption: *The purchase and cancellation of outstanding securities through a cash payment to the holder. Securities called for redemption, but not surrendered, cease to earn interest after the redemption date.*

Redemption Price: *The price at which a security is, in the case of mandatory redemption, or may be, in the case of optional redemption or a put, redeemed prior to it's maturity date. Redemption prices are determined when the security is issued, and are usually set either at par, or at a premium over par.*

Reference Banks: *Prime bank whose quotations for deposits in a money market are used by an agent banks in determining the interest rate on a floating rate instrument. For purpose of the LIBOR (Reference Banks) Floating Rate Option, four major banks in the London interbank market. For purpose of the Prime (Reference Banks) Floating Rate Option, three major banks in New York City. Banks are selected by the Calculation Agent.*

Reference Dealers: *For purposes of the Treasury Bill (Secondary Market) Floating Rate Option, three primary United States Government securities dealers in New York City. For purposes of the CD (Reference Dealers) Floating Rate Option, three leading nonbank dealers in negotiable Dollar certificates of deposit in New York City. For purposes of the Commercial Paper (Reference Dealers) Floating Rate Option, three leading dealers of commercial paper in New York City. For purpose of the Federal Funds (reference Dealers) Floating Rate Option, three leading brokers of the Federal funds transactions in New York City. For purpose of the Bankers Acceptance (Reference Dealers) Floating Rate Option, three leading dealers of bankers acceptances in New York City. In each case, Reference Dealers are selected by the Calculation Agent.*

Reference Rate: *The interest rate used as an index for pricing or determining cash flow of a derivative product.*

Regulatory Accounting Principles (RAP): *The reporting requirements as defined in the instructions for FFIEC regulatory reports. Wherever the instructions do not specifically cover a transaction, U.S. Generally Accepted Accounting Principles apply. RAP supersedes an institution's own standards in the event of a discrepancy between RAP and the official records of the institution. Any ambiguity regarding the instructions should be clarified by the FRB department which collects the report from the respondent.*

Regulatory Capital: *The minimum capital backing required by national regulators to cover the credit risk of banks' on- and off-balance-sheet activities, consistent with the terms of the Basle Capital Accord.*

Reinvestment Rate: *The rate at which an investor assumes his interest payments can be reinvested over the life of a security.*

Replacement Cost Method: *Another method used by the Basle Accord for assessing capital charges to cover the credit risk associated with banks' derivatives activities. It takes the mark-to-market value (i.e., the replacement cost of the contract, should the counterparty default) of a derivative contract and multiplies that value by an add-on factor that represents the potential volatility of the instrument over time.*

Repo: *Repurchase Agreement.*

Repricing (or Reset): *Recalculation of amount of the floating payment. Typical swaps are based on 6-month LIBOR and reset every 6 months. Commercial paper and prime rates are generally reset daily, and 91-day T-bills are generally reset weekly, but the reset frequency is negotiable in structuring the deal.*

Repricing Date: *The date on which the floating payment is recalculated.*

Repurchase or Reverse Repurchase Agreement (Repo or Reverse Repo): *An agreement with a customer to simultaneously sell securities for spot or current delivery and repurchase those securities for forward or delayed delivery. For the case of a reverse repurchase agreement, the transaction is reverse. This is a transaction used regularly to market-markers to finance their inventories of securities on a short-term basis.*

Reset Date: *The date as of which the floating rate is determined. Each calculation period may have one or more reset dates.*

Retail Investor: *An end-investor, non-market-maker who may be either a private individual or an institution.*

Retire: *To redeem, repay, or prepay.*

Reuters Screen NYMF Page: *Display designated as page "NYMF" on the Reuters Monitor Money Rates Service; displays prime rates or base lending rates of major U.S. banks.*

Reverse Repos: *Overnight purchase of a Treasury with agreement to re-sell the following day.*

Reverse Swap: *Exact offsetting swap written with the same or a new counterparty to establish a gain or loss.*

Risk Arbitrage: *Traders purchase or sell securities not on the basis of market imperfections, but on the basis of their judgements about the likelihood of future events, such as announced but still uncertain mergers, reorganizations, recapitalization, and/or tender offers. This form of arbitrage often involves substantial risk and offers correspondingly greater opportunities for profits and losses.*

Risk-Based Capital: *Defined in Part 325 of the FDIC Rules and Regulations to reflect different capitalization requirements for different balance sheet assets and off balance sheet instruments.*

Risk Management: *In the context of this document, altering the impact of market risks on the balance sheet or its components.*

Rollercoaster Swap: *Amortizing swap in which notional principal increases and decreases at predetermined intervals.*

Round-Lot: *The smallest amount of bonds traded in a dealers' market without a price differential or adjustment. Accordingly to AIBD rules, the minimum round-lot in the Eurobond market is $25,000 or its equivalent in other currencies. Round-lots vary in international and domestic markets according to the type of security and the currency of denomination.*

Run-the-Book: *To have primary responsibility for the documentation, syndication, distribution, payment and delivery in respect of a primary market issue of securities. Only one manager can run-the-book; that manager is considered to be the lead-manager.*

Safety and Soundness Examination: *Conducted by regulators to determine the financial capacity of insured institutions.*

Same-Day Funds: *Funds with good value on the business day on which the order to transfer the funds is made.*

Samurai Bond: *A Japanese foreign bond.*

Schuldscheindarlehen: *A promissory letter evidencing a participation in a Deutsche Mark loan in the domestic German capital market.*

Seasoned: *A security that, in the context of U.S. SEC regulations is non-exempt but has been outstanding for a period of time, which has been interpreted as 40 days after the original distribution. Non-exempt securities, which have not been registered with the U.S. SEC, may not be sold to U.S. residents until they are seasoned.*

SEC: *The Securities and Exchange Commission.*

Secondary Market: *The market for issues of securities which is made by market-makers after the completion of such issues primary market distribution and until their maturities.*

Section 20 Subsidiaries: *Nonbank entities belonging to bank holding companies which the Federal Reserve Board permit to underwrite and deal in* ***ineligible securities,*** *as long as these activities do not contribute more than ten percent of gross revenue. They take their name from Section 20 of the Glass-Steagall Act of 1933, which prohibits banks from affiliation with companies engaged principally in underwriting or dealing in securities.*

Secured Debt: *Debt backed by specified assets of the borrower. If there is an event of default, the lenders can force the sale of such assets to meet their claims.*

Securities and Commodities Exchanges: *Organized, national exchanges where securities, options, and futures contracts are traded by members for their own accounts and for the accounts of customers. The stock exchanges are registered with and regulated by the Securities and Exchange Commission (SEC); the commodities exchanges are registered with and regulated by the Commodity Futures Trading Commission (CFTC); where options are also traded on an exchange, such activity is regulated by the SEC.*

Stock, Bonds, Subscription Rights, Subscription Warrants and in some cases Options are traded on nine stock exchanges in the United States. The Futures Market is represented by 13 leading commodities exchanges.

Exchanges listing basic securities -- stocks, bonds, rights, warrants, and options in individual stocks - are the New York Stock Exchange, American Stock Exchange, and Regional Stock Exchanges.

The exchanges listing commodity and other futures contracts and options in addition to those individual stocks are (see individual entries): American Stock Exchange (New York), Amex Commodities Corporation (New York), Chicago Board of Trade (Chicago), Chicago Board Options Exchange (Chicago), Chicago Mercantile Exchange (Chicago), Chicago Rice and Cotton Exchange (Chicago), Coffee & Sugar & Cocoa Exchange, Inc., (New York), Commodity Exchange, Inc. (COMEX) (New York), International Monetary Market at (IMM) Chicago Mercantile Exchange (Chicago), Kansas City Board of Trade (Kansas City), MidAmerica Commodity Exchange (Chicago), Minneapolis Grain Exchange (Minneapolis), National Association of Securities Dealers Quotation System (NASDAQ), New York Cotton Exchange (New York), New York Futures Exchange (division of the New York Stock Exchange) (New York), New York Mercantile Exchange (New York), New York Stock Exchange (New York), Pacific Stock Exchange (San Francisco), Philadelphia Stock Exchange (Philadelphia).

Securitize: The aggregation of assets (e.g. mortgage loans), generally by similar characteristics, and conversion of them into securities which are issued by a third party.

Security. A marketable claim upon, or interest in, assets of a borrower, which may be in either bearer or registered form. These instruments are normally evidenced by a certificate; but, for example, in the case of certain U.S. Treasury obligations, ownership is evidenced by a book-entry only. Colloquially, the degree of legal protection, right to recourse and degree of a claim on the borrower's assets of a lender in an event of default.

Selling Concession: A concession, calculated as a flat percentage of the nominal amount of primary market securities, allowed to selling group members on the nominal amount they are allotted by the lead-manager.

Selling Group: A group of dealers, not necessarily affiliated with the securities firms in the syndicate, appointed by the lead manager to act as agent for the syndicate in selling shares of the issue to the public. Selling groups are not used in all underwritings.

Senior Securities or Senior Unsecured Debt: Securities which rank ahead of all other unsecured or subordinated debt in right of payment.

Separate Trading of Registered Principal of Securities (STRIPS): Zero coupon instruments derived from selected long-term notes and bonds. At a bondholder's request, the Federal Reserve, as the U.S. Treasury's agent, will separate a designated security into its individual coupon components and principal payment. The pieces may be traded separately and must be maintained on the Treasury's book-entry system.

Settlement: The arranging for the payment and the receipt or delivery of trading products.

Settlement Date: The date on which a transaction is completed and cleared, i.e. payment is effected and securities are delivered and it should not be confused with the trade date. In the Euromarkets, the settlement date is usually seven days after the trade date in the case of Eurobonds (including Floating Rate Notes) and it is usually two days after the trade date in the case of Cds and FRCDs.

Settlement Risk: The risk that an organization gives but fails to receive consideration from a counterparty upon settlement of a transaction. The importance of settlement risk varies materially among countries, exchanges and across product lines. In the U.S. for example, exchange-traded products are typically settled

on a net payment basis, with payment made by only one party. In the case of over-the-counter products (OTC) such as swaps, options, forward contracts and other OTC options, settlement risk can be appreciable for a counterparty that has delivered its side of the contract and is awaiting payment or delivery from its counterparty. The examiner should determine the settlement procedures predominant in the markets in which the financial institution participates and review the procedures the financial institution used to minimize its settlement risk.

Several: *In the context of a guarantee, for which there is more than one guarantor, it is the limitation of each guarantor's liability to only that portion it has guaranteed.*

Short Covering: *The purchase by a professional or retail investor of securities previously sold short in order to deliver them and thereby to close out a short position.*

Short-or Bear-Squeeze *A period of sharply rising prices in the market, caused by professional short covering rather than by investor demand. This is a technical situation and not necessarily due to long-term fundamental changes in the market.*

Short Position: *To "go short" or "sell short" means to sell a security not owned by the seller in anticipation of subsequently purchasing an identical security at a lower price. The seller's profit (or loss) is the difference between the sale and re-purchase prices.*

Short-Term: *In most markets, a period of less than one year.*

Sigma: *Volatility; measure of movement in a reference rate over time.*

Sovereign Immunity: *A historical doctrine of law in operation in certain jurisdictions, under which sovereign governments may not be sued or have their assets seized. In certain instances, a sovereign government may waive its immunity, or its immunity in respect of commercial activities may be limited by local law.*

Special Drawing Right (SDR): *A composite currency unit designed by the International Monetary Fund and which is based upon a standard basket system of valuation. The value of SDR is expressed in terms of U.S. Dollars.*

Speculator: *Party who enters a transaction to take a view on the market, such as interest rates or swap spreads.*

Spread: *The difference between the bid and the offered price or yield in the quotation of a security. The difference between the bid and offered prices or yields of two different securities, used when analyzing a switch. The term gross spread is used to refer to the total of the commissions paid to the managers, underwriters and selling group of an issue. Often incorrectly used in place of the term margin.*

Standard Basket: *A system of valuation of a composite currency, whereby the value of one unit is deemed to be equal to the sum of the values of specific amounts os stated currencies.*

Stock: *A term is often used interchangeably with the word share in connection with equity; for example preference shares are often referred to as stock. In the U.K., domestic market refers to specific fixed income U.K. Treasury debt securities. In the context of Local Authority Stock, the term refers to securities with an initial maturity of more than five years.*

Stock Exchange: *A physical location where trading in listed securities is carried out by professional*

members of the stock exchange.

Stop-Loss Order: *A mechanism by which a dealer (or end user) leaves instructions with a counterparty to buy or sell a particular instrument (currency, future, option, etc.) when its price reaches a certain level. The level of an index (Dow Jones Industrial Average, S&P 500, CRB, etc.), or the price of a different but related instrument can also be used as the trigger mechanism for the order.*

Straight or Straight Debt: *In the context of debt security issues, colloquial usage for fixed rate or fixed income securities.*

Strike Price: *The price of the instrument or currency, at which the buyer of the option on that security or currency, will exercise their right to buy or sell the underlying instrument.*

Stripe: *Swap Transferring Risk with Interest Participation Element. Selling an in-the-money floor and buying an out-of-the-money cap (at the same strike price) such that the proceeds from the sale of the floor exactly offset the cost of the cap. The borrower's AIC is capped exactly at the strike price.*

Subject, Subject to Confirmation, or Subject to Prior Sale: *A quote or indication of price that is not firm and cannot be relied upon as the basis for a transaction.*

Subordinated Debt: *Securities on which the claims of a holder on the assets of the borrower rank behind other debt in right of payment in a liquidation.*

Swap: *A financial transaction in which two counterparties agree to exchange streams of payments over time according to a predetermined rule. Swap is normally used to transform the market exposure associated with a loan or bond borrowing from one interest rate base (fixed term or floating rate) or currency of denomination to another.*

Swap Codes: *The codes of terms published by ISDA.*

Swaptions: *An option to enter (or cancel) a swap.*

Switch: *The sale of one security against the purchase of another. Switches fall into three basic categories, although a given switch may have aspects of two or more of these categories. Portfolio Improvement Switch -- to improve upon one or more characteristics of the original securities. Yield pick-up, quality improvement and switches to change call protection fall within this category. Yield Curve or Rate Anticipation Switch -- in anticipation of a change in the overall level of interest rates. A rate anticipation switch generally consists of lengthening the maturity and/or lowering the coupon when bullish; and shortening the maturity and/or raising the coupon when bearish. Intermarket Anomaly Switch -- in anticipation of a favorable change in the price or yield spread between two issues for two different sectors of the capital markets.*

Synthetic Swap: *The combination of financial instruments that together replicate the cash flows from a swap.*

Systemic Risk: *The risk that a disruption (at a firm, in a market segment, to a settlement system etc.) causes widespread difficulties at other firms, in other market segments or in the financial system as a whole.*

Termination: *The cancellation of a swap agreement, usually for a fee.*

Theta: *The rate of change of the price of the option portfolio with the passage of time. Theta can also be viewed as the time decay of the portfolio.*

Tier 1 Capital: *Defined in Part 325 of the FDIC Rules and Regulations essentially as common and preferred stock less most intangible assets and identified losses.*

Time Decay: *Deterioration in the time value of an option due to the passage of time. As the option approaches expiration, uncertainty and the embedded cost of carry decline, reducing the overall value of the option.*

Time Value: *The portion of an option's value which exists because the option has not yet expired. Its magnitude depends on the time left to expiration and the volatility of the market for the underlying currency. Time value can be thought of as the amount by which an option's total premium exceeds its intrinsic value.*

Tombstone: *An advertisement that states a borrower's name, certain terms of a specific issue of its securities, and lists the managers and often the sub-underwriters. It does not constitute any offer to buy or sell such securities, but is published as a matter of record, to advertise the completion of the transaction.*

Total Return: *The coupon income, plus the reinvestment of the income, plus any change in the market value of a security over a certain period. The total coupon interest and change in market value of a security over a certain time period divided by the initial price, expressed as an annualized percentage rate of return.*

Trade Date: *The date a transaction is effected or executed.*

Trader: *A person whose intention is to profit from the buying, and selling, of securities, rather than from holding them for investment purposes. This term usually refers to professionals in the bond markets.*

Trading (Dealing): *Refers to the practice of an institution to buy and sell equity securities on its own behalf, usually from an inventory of securities held in a trading account, in order to make a market in the security(s) or to otherwise trade with customers and other dealers with the expectation of earning profits from numerous short-term trades.*

Tranche: *Parts of a single securities market operation, which may have shared documentation but different terms (and may be denominated in different currencies) e.g. a Y20 billion issue, one tranche of Y10 billion having a five-year maturity and a second tranche of Y10 billion having a ten year maturity. Cds or FRCDs issued with identical terms, in large blocks of small denominations and distributed globally to retail investors.*

Treasury Bill: *Short-term government debt instruments, usually issued on a discount basis.*

Trustee: *An institution appointed and contracted by the borrower to represent the interests of the holders of a given issues securities of that borrower.*

Two Way Payments: *Provision under a master agreement establishing the continuation of contractually obligated payments following a bankruptcy or other default event. Limited two way payments allows for the possible interruption of contractual cash flows due to certain default events (such as FDIC receivership), while unlimited two way payments require the continuation of such cash flows irrespective of the nature of the event.*

Two-Way Market: A market in a given issue of securities in which dealers or traders make both a bid and an offered price, both of which prices are firm for immediate execution in round-lots.

Underlying: The designated financial instruments which must be delivered in completion of an option contract of a futures contract. For example, the underlying may be fixed-income securities, foreign exchange, equities, or futures contracts (in the case of an option on a futures contract).

Underwrite: To agree to purchase securities (if they are not purchased by others), i.e. to contract to buy the unsubscribed securities of a primary market issue on a given date at a specific price, thus guaranteeing the borrower the full proceeds.

Underwriter: Under generally accepted market terminology, an underwriter is each member of a new issue syndicate who is invited to sub-underwrite a new issue but who does not participate as a manger. In legal terms, it is each member of a new issue's syndicate, including the managers and the sub-underwriters, who contracts to underwrite a new issue.

Underwriting: The process whereby a securities firm, or group of securities firms known as a syndicate, agrees to buy, on a firm commitment or on a best efforts basis, all or part of an issue of securities usually for resale. The securities are resold to other investing or trading parties with the expectation of profits to the securities firm or the syndicate.

Underwriting Agreement: An agreement between the managers, as agents of the borrowers, and each of the sub-underwriters, which sets out the obligations of each sub-underwriter to subscribe for a specific amount of the issue, in the event that the full amount of the issue is not subscribed for by members of the selling group.

Underwriting Fee or Commission: A commission, expressed as a flat percentage of the nominal amount of the securities underwritten, to which underwriters are entitled pro rata to the nominal amount they underwrite. This fee is paid net of issue costs not reimburse by the borrower, and net of stabilization costs or plus stabilization profits.

Unmatched Position: Acceptance of the market risk of a contract without entering into an opposite or offsetting contract to allow benefit from the same market risk or risks.

Unwind: Either the mutually agreed termination of a transaction, generally with payment by one party on an agreement value basis (also called Cancellation). For the case of a swap, the writing of a second swap with an identical notional amount, payment dates, and maturity date, with similar interest rate calculations but at the new current rates and on a reverse basis (also called a Mirror Swap).

Up Front Payments: An amount paid at the outset of a swap sometimes in connection with services (such as services in arranging a larger financing of which the swap is a part) and some times in consideration of an adjustment to the rate at which swap payments will be computed or the frequency with which payments will be made.

U.S. Bank: Banks whose headquarters are domiciled in the states or possessions of the United States.

Value Calculation Models: Used to calculate the present value of future cash flows using forward yield curves and probability expectations.

Variation Margin: The gain or loss on open positions, calculated by marking to market at the end of each trading day. Such gain or loss is credited or debited by the clearinghouse to each clearing member's

account and by members to their customer's accounts.

Vega: *The rate of change of the price of the portfolio with respect to the underlying asset's volatility.*

Volatility: *A measure of the degree of fluctuation in the closing price of a currency in terms of another currency.*

Warrant: *A certificate, attached to a debt security, which gives the holder the right to purchase either a number of shares of the borrower's common stock or specific fixed or floating rate bonds at a stipulated price. Warrants are valid for a specified period of time which may lapse either before or, in the case of warrants to purchase common stock, on or after, the maturity of the debt security. Warrants are invariably detachable and may be traded independently at the debt security.*

Withholding Tax: *A tax which a borrower is legally obliged to deduct from its payments of interest on securities issued by it.*

Writer: *The seller of an option.*

Yankee Bond: *A United States foreign bond.*

Yield Basis: *A method of expressing the value of a security. In a market made on a yield basis, the dealer states both a bid yield -- meaning the dealer will pay a price for the security which will provide the dealer with that yield-to-maturity; and an offered yield -- meaning he will sell the security at a price which will provide the buyer with that yield-to-maturity.*

Yield Curve: *A graph showing the relationship between yields and maturities for a set of similar securities or interbank deposits.*

Yield Curve Risk: *A specific type of basis risk is that the spread in yield between various maturities of the same security will change as the shape of the yield curve changes (non-parallel shifts) resulting in a market value loss in a maturity mismatch trade.*

Yield Curve Swap: *A swap in which one set of payments is based on the market rates for a particular security, e.g. receiving LIBOR versus paying the 10-year Treasury rate.*

Yield-to-Average-Life (YTAL): *The yield derived when the average life is substituted for the maturity of the issue by assuming that the security is redeemed in accordance with the amortisation schedule for the issue, and therefore, has a theoretical maturity equal to the average life.*

Yield-to-Call: *The return a security earns computed by assuming that the maturity is on the first call date and that the security will be redeemed at its call price.*

Yield-to-Maturity (YTM): *The return a security earns on the price at which it was purchased if it is held to maturity. This is a function of coupon interest, reinvestment rate and accrual of discount or amortisation premium. It assumes that coupon payments are reinvested at the same rate as the yield-to-maturity.*

Yield-to-Put: *The return a security earns computed by assuming that it is held until a certain date and put to the borrower at the specified put price.*

Zero Coupon Securities: *Securities issued in the primary market at a substantial discount to their*

principal amount at final maturity, with no coupons attached and paying no current income. Such securities may have certain tax benefits for both borrowers and investors in certain jurisdictions.

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